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THE RECORD OF A YEAR IN RUBBER.

THE effect of the recent period of business depression in the United States may be measured by the decline in the imports of crude India-rubber for 1894, which were less by 4,000,000 pounds than in the preceding year. If the deliveries to manufacturers for the two years be compared, the decrease is still greater,—over 4,500,000 pounds, or about 12½ per cent. It is obviously impossible to obtain trustworthy statistics of the manufacture of rubber goods, by which comparisons may be made, one year with another. Manufacturers cannot be expected to disclose, before the eyes of their competitors, the extent in quantity of their production, while values are too indefinite to serve any useful purpose in making comparisons. But so great a decline in the importation of crude rubber can have no other meaning than that the consumption has declined, especially when it is known that stocks in the United States were greater at the end than at the beginning of the year. For the reasons just given it is not possible to locate the decreases in manufacture, or to classify the branches of production as between those which have experienced a decrease and those which have not. The consensus of opinion, however, is that the manufacture of rubber footwear has not declined, while the belief seems general that more goods have been made in this line than in any preceding year. In the mechanical-goods lines, in waterproofing, and in the countless sundries which are to be seen in the market, the business of manufacturing is less systematized than in the shoe trade, rendering comprehensive facts less easily obtainable. It is known that more bicycle-tires have been made, year by year, but the consumption of rubber has not increased proportionately, both on account of the steady decrease in the weight of the tires, and because through improvements in compounding better results are now obtained than from the use of pure gum.

There is no evidence that the decrease referred to is more than temporary in character. Doubtless an accurate industrial census of the country would show that no other large interest has suffered less severely than the India rubber industry; yet we hear nothing of a decline in importance of the United States as a manufacturing country. While the rubber industry has a record of a steady and rapid development by periods of years, the imports of crude gum in 1883 showed a decline as compared with the preceding year, and so in 1887, in 1889, and in 1892. The importation for the year just closed does not fall much below the annual average for five years preceding, while it is more than three times greater than the receipts for 1876. Among the reasons for considering the latest falling-off merely as one of a series of fluctuations, it is to be noted that during the year no firms have retired from the rubber industry, and no factories have been closed for an unusual period. On the other hand, as reference to our files will show, numerous additions and improvements have been reported from rubber factories during the year, and rubber articles are now produced in a greater number of establishments than in any former year. There have been no fail-

ures, assignments, reorganizations or other business troubles of moment, and it is safe to say that the trade is in a thoroughly good condition, without excessive stocks at the factory or in dealers' hands, and with an increasing consumptive demand upon which to base an increased production for some time to come.

It might have been supposed that, with a period of depression to accentuate the natural tendency of competition to cheapen production, the past year would have shown a wider use of African rubbers. It is known that within a year or two some of the African grades have been adapted for uses for which only fine Pará was formerly considered suitable, but this change doubtless would have come, on a question of merit, without the influence of hard times. Probably the surprise of the year to some people will be the fact that, among the different grades of rubber imported, the greatest decline has been in Africans. It must be said for the rubber trade that, while alive to every legitimate means of cheapening products, the controlling sentiment remains in favor of excluding from the market, so far as possible, goods that are cheap only because they are bad.

The subject of prices of crude rubber has been treated in detail in our market review, but a feature which deserves mention here is the increased consumption of rubber in Europe, and its effect in keeping prices firm in spite of a decreased demand in the United States which, in former years, might have depressed the market. There is reason to believe, not only that the use of rubber goods is extending beyond the Atlantic, but also that the manufacturers there are not disposed to neglect the chance to profit by it. It cannot be said that the prospect is encouraging for American manufacturers to exert themselves greatly to sell their wares in other countries producing similar goods. It only remains to be seen how far they can push their export trade into what are called neutral markets, and in which English and continental rubber-manufacturers are already gaining a steadily-increasing trade.

THE CRUDE RUBBER MOVEMENT OF 1894.

IMPORTS of crude India-rubber into the United States during 1894 showed a decrease, compared with the preceding year, of 4,000,000 pounds. The falling-off in the various grades of rubber is shown by the figures which follow:

	1893.	1894.
Fine Pará	16,676,000	15,315,000
Coarse Pará	6,531,000	5,856,000
Centrals (including Caucho)	5,312,000	5,169,000
African and East Indian	8,261,000	6,457,000
Total	36,780,000	32,797,000

Of the total falling-off about 34 per cent. is in fine Pará, 17½ per cent. in coarse Pará, 3½ per cent. in Centrals, and 45 per cent. in Africans.

The total exports of India-rubber from Pará during 1894 (the figures for December being subject to correction) were 40,870,000 pounds, as against 42,068,000 pounds in 1893, and 41,274,000 pounds in 1892. The average exports for five years preceding 1894 were 38,748,400 pounds.

In the annexed table is shown the consumption of India-rubber in the United States and Canada for 1894, as compared with previous years. There is a falling-off in comparison with 1891 and subsequent years, though the figures are larger than for any year previous to 1891.

DETAILS.	1892.	1893.	1894.
Imports to United States	34,348,000	36,780,000	32,797,000
Exports to Europe	1,100,000	1,600,000	875,000
	33,248,000	35,180,000	31,922,000
Add Stock January 1	2,435,000	2,725,000	2,322,000
	35,683,000	37,905,000	34,244,000
Less Stock December 31	2,725,000	2,322,000	3,182,000
Deliveries to Manufacturers	32,958,000	35,583,000	31,062,000

These figures have been courteously supplied to THE INDIA RUBBER WORLD by Messrs. Earle Brothers (New York), in advance of the publication for 1894 of their annual statistical sheet, which for thirty years has been recognized in the trade as an authority.

A NEW RUBBER SHOE COMPANY.

IN New Jersey the Liberty Rubber Shoe Co. have filed articles of incorporation, stating their object to be "to manufacture rubber fabrics and sell the same, and manufacture, buy, and sell rubber boots and shoes." The amount of capital mentioned is $400,000, and the incorporators are Benjamin F. Jayne, of Brooklyn, and of B. F. Jayne & Co., coal merchants, No. 66 South street, New York; Edwin Elberson, of New Brunswick, N. J., and formerly interested in the Brookhaven Rubber Co., and Edwin C. Phelps, of Jersey City, and with the Bristol Brass and Clock Co., No. 32 Warren street, New York No meeting of the incorporators had been held up to the time of going to press of this paper.

THE LATE WILLIAM B. NORTON.

THE death of Mr. William B. Norton, at Walpole, Mass., on September 22 last, has been recorded in THE INDIA RUBBER WORLD, but without the facts respecting his life which follow. He was born October 31, 1863, which made him only thirty years and eleven months old at the time of his death.

After having received a mercantile experience in the dry-goods business in Boston, Mr. Norton entered the employ of Messrs. George A. Alden & Co., importers of crude India-rubber in that city, beginning with them in May, 1887. Having acquired a knowledge of the rubber business, he went to Pará as an assistant to Mr. J. C. Robinson, agent of the New York Commercial Co., of which Mr. George A. Alden is the president; the two representatives finally associating themselves together under the firm name of Robinson & Norton. In August, 1890, Mr. Robinson retired from the Pará business, and Mr. Norton continued alone, under the firm name of Norton & Co. In the spring of 1894 Mr. Norton was obliged to retire because of serious illness, caused by quick consumption, from which he was a great sufferer up to the time of his death; the firm of Norton & Co. being succeeded by that of Adelbert H. Alden.

Mr. Norton was a man of sterling character, and, during his residence at Pará, represented the large interests of the New York Commercial Co. with great ability. Mr. Norton was United States vice-consul at Pará during a portion of his residence there. He leaves a widow and three children.

VULCANIZATION OF SMALL HARD RUBBER SPECIALTIES.

By John T. Usher.

THE vulcanizing of hard rubber specialties as carried on by thousands of dentists and makers of specialties is done by steam and is known as the "wet" heat, as the live steam enters the vulcanizing chamber.

Vulcanizers are divided into two classes: those in which the steam is directly generated, and those in which the steam is supplied from a separate generator, as an adjacent boiler. The latter form are very rarely used for the work that is under consideration, and indeed they are so simple that there is little to be said concerning them. With regard to the former, however, there is much that may be said, and especially of those where a thermometer is used to indicate the internal temperature of the vulcanizer instead of a steam gage to indicate the pressure. This practice is not to be commended, because the operators are often misled by the reading of the thermometer and are liable to be misled in an arithmetical estimate of the number of pounds pressure they are carrying.

The arrangement of a thermometer is practically the same on all makes and classes of small vulcanizers. The thermometer being held in a standard, the bulb being immersed in a mercury bath which forms a metallic connection between it and the body of the vulcanizer. This arrangement is intended to give as close an approximation to the internal temperature of the vulcanizers as it is possible to obtain. But it is a well known fact that under the most favorable circumstances the best thermometers never indicate the actual internal temperature of the vulcanizers. It is also doubtful if it is even suspected to what extent this variation between the actual and the indicated temperatures exists in practice, particularly when a thermometer alone is relied on for this purpose. This is a subject well worth the most careful investigation. It takes several minutes for the thermometer to indicate the existing temperature, and also to register any sudden change. There is further a direct loss in the transmission of the heat from the interior of the vulcanizer to the mercury bath. The loss from this cause varies in different vulcanizers according to the thickness of the base of the mercury bath, and of the body of metal surrounding it. This loss is always further augmented if air is allowed to remain in the vulcanizer. When a thermometer is used for indicating the internal temperature all the air should be expelled from the vulcanizer by opening the blow-off valve as soon as any steam is generated. When this is done it is always possible to get a closer approximation and registration of the internal temperature and pressure. This of course is less the amount lost by transmission which I have never known to be less than 12° temperature and 15 pounds pressure and seldom less than 18° temperature and 25 pounds pressure under the most favorable circumstances, between the actual and the indicated temperatures and pressures. Thus when the thermometer registered 320° F. the steam pressure, when a steam gage was applied, would never be less than 90 pounds and from that to 100 pounds. Again, when the air has not been expelled from the vulcanizer the gage pressure may reach a point as high as 160 pounds before the mercury reaches the 320° mark, particularly if the pressure and temperature have been raised from that of the surrounding atmosphere very rapidly, say in four to eight minutes.

This excessive pressure does not exist more than from two to five minutes, if the mercury is kept on the 320° mark, but would be gradually reduced to the point where it and the mercury will remain at their respective points without changing. The gage pressure generally carried is not less than 125 pounds, and often runs as high as 140. This is proved by the short time taken to hard cure well known compounds. To make this point clearer, rubber which is vulcanized hard in 55 minutes, with 90 pounds pressure, temperature 332°, if put into a vulcanizer, from which the air has not been expelled, and the heat run up to 332°, will be vulcanized in half an hour, showing that the real heat is far greater than the indicated.

The conditions under which the pressures run so high never exist except in the case of vulcanizers, in which the steam pressure is directly generated, as it is obvious that, where the steam is supplied from an adjacent boiler, the pressure and temperature could not exceed that of the source of supply. Still, it is equally important that the air should be expelled from the latter as from the former, as its presence is a hindrance to vulcanization.

The results shown in the table below, and which recently appeared in the *American Machinist*, in connection with a series of articles on "Rubber Pattern Work," were deduced from a series of experiments extending over several months, conducted by the writer, to determine the shortest time in which different kinds of "55 minute rubbers" could be vulcanized.

Pressure.	Temperature.	Time.
75 lbs.	320° Fah.	80 minutes.
80 "	324 "	70 "
85 "	328 "	60 "
90 "	332 "	55 "
95 "	335 "	50 "
100 "	338 "	45 "
105 "	341 "	40 "
110 "	344 "	35 "
115 "	347 "	35 "
120 "	350 "	30 "
125 "	353 "	30 "
130 "	355 "	25 "
135 "	358 "	25 "
140 "	360 "	20 "

A difference is naturally made if a longer time is taken to raise the heat to the point desired, and also in the time taken to cool off after vulcanization. With regard to the time taken to raise the temperature to the vulcanizing point it should always be the shortest consistent with a successful cure, usually from four to twenty minutes, varied

according to thickness of the rubber and the number and thickness of the molds in the vulcanizer. When the thickness of the rubber does not exceed ¼ inch, and the molds are metal, the temperature and pressure may in most cases be raised as rapidly as possible without any danger of blistering, but where the rubber exceeds ¼ inch in thickness the time should be extended so as to insure its more gradual heating. In most, if not all, cases where a variety of hard rubber specialties are manufactured, the cost could be materially reduced by a little careful and intelligent experimentation. For instance, where the articles to be vulcanized are of the ordinary thickness, say ¼ inch or under, they could be just as safely vulcanized at 140 pounds as at any lower pressure. With regard to the assertion that hard rubber is injured by vulcanizing at as high or higher temperature than 320° there is no foundation whatever for it, as has been fully proved.

A series of questions put to dentists and other makers of specialties show that the number of pounds pressure used by them in vulcanizing vary from 85 to 120 to obtain a degree of heat equivalent to 320° F., showing that hundreds are unconsciously vulcanizing at high pressures and temperatures and getting good results. The question of vulcanizing on the most economical basis resolves itself into watching pressure, temperature and time for each particular class of goods, and making the pressure the highest that can safely be used. It is, and always will be, an open question whether blistering is induced by raising the temperature in the vulcanizer too rapidly. In the writer's opinion this is caused more frequently by cooling the vulcanizer too suddenly after the rubber has been vulcanized, the outer surface of the rubber thus becoming suddenly hard, the inner portion is still in a soft spongy state and the gases get a chance to expand. In vulcanizing articles which exceed ¼ inch in thickness the pressures used should be less than 100 pounds, and below ¼ inch in thickness pressures above 100 pounds may be used. In vulcanizing at pressures less than 100 pounds the pressure is raised to the point desired in from ten to fifteen minutes, and for pressures above 100 pounds in from fifteen to twenty minutes. After vulcanizing the heat is shut off, and the vulcanizer allowed to cool for ten minutes, for pressures below 100 pounds, and for fifteen minutes for pressures above 100 pounds, during which time the vulcanization of the rubber is really being completed; therefore if this time is not allowed for cooling off, it should be added to the table of time. It is impossible to obtain as accurate results when vulcanizing by thermometer as when vulcanizing by steam gage, but a closer indication could be obtained of the actual pressures and temperatures of the vulcanizer, if the thermometer were graduated on the vulcanizer to the exact conditions under which it will be used, instead of graduating the thermometer in a test machine.

AMERICAN RUBBER ERASERS BY THE TON.

By Gustav Heinsohn.

IT was in the form of erasers that "caoutchouc" first came to have a commercial value. Half-inch cubes of this strange gum obtained from the Indians were sold by Mr. Hairne, mathematical-instrument maker, opposite the Royal Exchange, London, for 3 shillings each, and Dr. Priestley wrote of their value for rubbing out lead-pencil marks. Hence they began to be known as "Indian rubbers," from which we get the present popular designation of the gum. The amount of this substance now needed every year to wipe out mistakes of pencil or pen is measured by tons, while the saving in time and the advantage in respect to neatness and accuracy to artists and designers, bookkeepers and writers, are incalculable.

One eraser may have been as good as another at the beginning, but nowadays they vary in styles and quality, according to the different uses required of them, as widely as any other product of modern ingenuity. The artist is not more careful in selecting pencils for his sketches than in adding to his outfit the eraser best suited to remove the marks made by each particular pencil in case of a slip or mistake. The dainty writing-table in a lady's boudoir must have erasers suitable to their surroundings. The operators of typewriters dispute over the advantages of their respective erasers, and the choice of one bookkeeper will be scorned by another. In the patent office will be found no end of styles, each believed by somebody to be an improvement over all others. But it is quality rather than shape that is all important here.

Not every rubber-manufacturer who has tried has succeeded in making saleable erasers. How to prevent the bits of rubber from "smutting" the paper has been a problem too deep for many a compounder. Besides, the erasers turned out might become too hard, or too soft, instead of retaining their original character. It thus happens that the manufacture of these articles has been confined to a smaller number of firms, perhaps, than any other item of the trade in general demand. At Newark, N. J., a rubber factory in which crude gum is bought in the regular markets and taken through all the preparatory processes is devoted almost entirely to making erasers and bands for the stationery trade. An interest in the firm is owned by a celebrated family of pencil-makers, whose business dates from 1761, in the vicinity of Nuremberg. From this factory is supplied the bulk of the erasers sold in the American market, besides which important shipments are made to the leading centers of trade in Europe, while most of the erasers used elsewhere have the same origin. Perhaps no erasers of foreign manufacture are now offered for sale in America. Some of the typewriter firms and other large purchasers of these goods sometimes have their names printed on them, but this is no evidence of who manufactures the rubber. The firm controlling the Newark plant say that one other rubber company in the United States is making erasers, and an important pencil company of American origin is just now getting into position to make erasers at its own works. In one sense rubber erasers are im-

ported ; that is, sheet rubber turned out at Newark is sent by one house to Germany, where it is cut into erasers, certain styles being mounted in pieces of Florida cedar, the wood being polished, painted, or otherwise ornamented in a variety of styles. Many of these are then shipped to America.

In the matter of variety it may be mentioned that one catalogue of stationer's supplies has a list of fifty-five ink and pencil eraser tablets, rubber pencils in cedar, artists' rubbers, ink-erasers (which include sand, to give a better cutting effect upon the paper), book-cleaners, etc., besides the various specialties protected by patent, or manufactured to meet the demands of certain typewriter houses. The book-cleaners are mounted in pieces of cedar on one side of which is a bit of plush for wiping away any of the paper fiber loosened by the rubber. Still other erasers are equipped with small bristle brushes instead of plush. What are called "Scotch" erasers have the wooden portion covered with tartan paper, instead of being polished. In size there is a wide range. The same quality and style of rubber tablets for a certain purpose are made in sizes which give the purchaser a choice all the way from 12 to 80 pieces to the pound. In shapes, one can have oblong, square, circular, elliptic, or wedge-shaped erasers, with edges plain or "fringed." No account has been taken yet of the rubber-tipped pencil, of which class alone there is an infinity of styles. The old-time rubber cap on the end of the pencil has disappeared. The bit of rubber inserted into the end of the wood seems to be losing its popularity. The manufacturers say that the best demand now is for a nickel device called a point-protector, one end of which is equipped with a rubber eraser, while the other slips over the pencil-point when that is not in use, and over the other end of the pencil when one is writing. Supplied with one of these, its owner may apply it to one pencil after another, for it does not readily wear out.

Where all the erasers go is a question. As already suggested, typewriters and bookkeepers use a great number. Every dealer in artists' materials keeps a good supply. The schools represent an immense consumption—to use the word in a certain sense, but not meaning that the children eat the erasers. In New York city all books and other supplies needed by children in attendance upon the public schools are paid for from the public funds, the purchases being made under contract, and each child's yearly outfit includes a rubber eraser. The same system prevails in Massachusetts, and there the public funds also pay for a great number of erasers. Doubtless the same is true wherever compulsory-education laws exist, on the principle that if children are forced to attend school they must have no excuse for not being equipped for school-work. The London school board buys 1½ tons of erasers yearly, there being 72 to the pound. Notable displays of rubber erasers were made at the Philadelphia Centennial and at the World's Columbian Exposition, but while they served to acquaint very many people with the great variety in this line of goods, they could give no idea of the extent of the trade. This, it is safe to say, is rapidly increasing.

THE ROYAL AND ANCIENT GAME OF GOLF.

WHEREVER two or more Scotchmen are gathered together there is sure to be talk of golf, and, if circumstances will permit, a golfing links. Their countrymen have carried this healthful outdoor sport into every continent ; it flourishes in the United States, in Australia, in India. The Scotch of to-day have come honestly by their love of golf, for their ancestors were so addicted to it a few centuries ago as to excite all the reformers of the time. It was at once the national game and the national evil. Golf was denounced from the pulpit because it was played "in tyme of sermonses," leaving only empty benches in the "kirk," and in parliament because it led to neglect of the art of war, so necessary for defense against the English. One of their kings laid a prohibitory duty upon imported golf balls because they were taking all the gold out of the country. Thus were combined in the fascination for the little leather-covered balls problems equal to the weightiest that now confront the good government clubs in New York and the national administration at Washington.

Although some of the Scotch golf clubs have been maintained uninterruptedly from very early times, public interest in the game declined for awhile to a great extent. Whatever may have been the cause of this lapse, the revival of interest must be attributed largely to the introduction of Gutta-percha balls, which was about 1848, according to Mr. H. G. Hutchinson's book on golf, in the "Badminton" series. The earlier balls had been composed of a circlet of leather, stitched together in sections and stuffed as hard as a stone with feathers, sometimes with the addition of a little lead. They were not only very expensive, but "almost incomparably less durable" than Gutta-percha. The feather balls were good ones, however, and their manufacture, involving the extremely neat sewing of the seams, constituted an art in which men were proud to be deemed masters, but they are now as obsolete as the old flint lock fowling-pieces. Meanwhile the demand for Gutta-percha balls has grown to millions, annually, and well deserves to be treated in a journal devoted to the India-rubber and allied trades.

It may interest the trade first to consider the extent of the taste for golf and the reasons for considering the sport as permanently established. This is decidedly an athletic age, the utility of outdoor sports being no longer denied. Their popularity has been increased greatly by the admission to them of women. Evidently those sports are bound to become popular, if they have other points to commend them, in which everybody can join, which is not true of baseball or football games. Golf, which is played on a green, by driving balls from point to point and holing them by dexterous strokes with clubs, gives a reasonable amount of healthful exertion, besides affording an exer-

cise of skill which lends fascination to the game. It is not expensive, and a whole village may play upon the same links. In Scotland the game is not only popular with the leisure classes, but is enjoyed by mechanics and workers in other trades after their hours of labor. The same thing is fast becoming true in England, and some good people are urging that such recreation for the masses is better for the community than the thronging of the public houses. The growth of the sport in England is illustrated by a recent newspaper advertisement of a house for sale, one inducement being that the grounds are well suited for a golf course.

Golf has made rapid headway in the United States of late. The St. Andrew's Golf Club, of New York, the oldest organization of its kind in this country, dates from November 18, 1888. Now, a dealer in sporting goods assures THE INDIA RUBBER WORLD, the number of golfers in the United States is not far short of 100,000. No less than thirty important clubs are mentioned in connection with the movement to organize a national association, and to build a course for golf championship contests. Among the cities represented are Boston, Philadelphia, Chicago, and Newport. The club at the latter place, by the way, has a clubhouse and course reported to have cost $150,000. Good shipments of golf supplies leave New York for Colorado Springs, Colorado, and for points in New Mexico, Florida, and other distant states. A store lately visited by the writer had received on that day orders for golf goods from the Gould and Havemeyer families and from Ogden Mills. An enthusiastic golfer is the Rev. Dr. W. S. Rainsford, a distinguished clergyman of New York. The London *Times*, in an article on the growth of golf, mentions that the year 1894 witnessed the reaching of important proportions of the game in the United States. But the character of the people interested and the amount of money expended already are a guarantee that we have here something more than a mere fad. People can understand golf, and all who wish may play it, while it is asserted by a writer in the New York *Sun* that not more than 20 per cent. of the people who look at a football game have any idea at all of the scientific points involved.

A question for the trade in the United States is whether any benefit can be derived from this new demand in our country for Gutta-percha. A further question is whether India rubber can be used in golf. One who has not seen the figures would be astonished to know how many golf balls have been imported already. The dealers in golf goods are ready to encourage home manufacturers who can supply balls of good quality at a lower price than the cost of the English balls, plus the duty. At the same time, attempts are being made to meet this new demand, particularly with hard-rubber balls. Some years ago, on the other side, a composition ball known as the "Eclipse" had a great run, but was finally retired as not possessing, on the whole, as many advantages as Gutta-percha. The experience was sufficient, however, to give promise that the trade may yet be supplied with a satisfactory ball cheaper than those now in use, even if the Gutta-percha ball should not be wholly displaced. The manufacture of golf balls requires no small care. For instance, it has been decided that the weight should not vary more than ½ pennyweight from 27½ pennyweights. A standard size is also insisted on, and a certain degree of resiliency. The ball must not be too hard, nor must it crack or break too easily. It is evident, therefore, that mere guesswork is not likely to result in balls, of either Gutta-percha or India-rubber, that will fill all the requirements. But with such a large sale, at $4 to $5 a dozen (retail) for balls weighing less than 2 ounces, a reward exists for something more than guesswork in the rubber factory.

The largest manufacturers of golf balls to-day probably are the India-Rubber, Gutta-Percha, and Telegraph Works Co., who make the "Silvertown" ball and also the "Hutchinson," the latter being marketed by the rubber company of that name. The "Edinburgh" ball is made by the North British Rubber Co.; the "Black A1" by the Gutta Percha Co.; and the "Melfort" by the W. T. Henley Telegraph Works Co., all of which are English concerns. This list, by the way, does not include all the manufacturers of these goods on the other side. In this country some golf balls have been made of India rubber by the B. F. Goodrich Co., by the Newton Rubber Works, and others.

The first Gutta-percha balls were smooth, without nicking or lining. They were cheaper and rounder than the feather balls, but failed to fly as well. Golfers who used them for awhile said that they seemed to fly better after having been hacked by the iron clubs. Hence the manufacturers got to hacking the balls with a hammer-head sharpened for the purpose, before painting. Next a mold was devised, with ridges inside, which stamped the nicking upon the ball, and soon all the demand was for machine-made balls. The nicking or lining is commonly supposed to give a kind of rotatory motion to the golf ball, similar to that given to a rifle bullet by the grooves in the barrel, with the result of a longer flight. But this theory is challenged by a Professor Tait, who declares the nicks in the Gutta percha to be an obstacle to flight, because of the resistance they offer to the air. He says that if the ball were smooth and unnicked, that portion of it which is compressed by the impact of the club would spring out again with dull and sluggish elasticity, compared to the spring of the reaction of the numerous ridges and little knobs which are formed by the nicking. This quicker spring is a gain of such importance as to overbalance the slight detriment to flight offered by the roughness upon the ball's surface.

THERE has been brought out in Manchester, England, a pneumatic bicycle-brake, worked by a pressure-ball on the handle-bar. The communication between the parts is by means of a rubber tube lying along the framework. It was shown at the late Stanley Cycle Show, in London, where it was pronounced a neat and effective arrangement.

TWENTY-FIVE Dublin jaunting-cars have been fitted with the Dunlop pneumatic tires. The fare in these vehicles is 50 cents for the first hour and 37 cents an hour thereafter, for two passengers.

BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

AMONG recent patents issued by the United States patent office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully:

TIRES.

No. 529,091.—Pneumatic-Tired Wheel. Henry W. Verdon, London, England.

In a pneumatic tire, the combination of the cover having beads or enlargements on each edge, the beads being split transversely at one or more places; of the air tube provided with any suitable valve for inflation and deflation; and of the wheel rim having channels at its edges, each having one or more openings formed in it, and capable of being closed by sliding pieces.

No. 529,120.—Bicycle-Tire. Edward S. Frazer, Aurora, Ill.

The combination with a wheel-rim, a tire, and a tire retaining wire, of a U-shaped plate, arranged within a part of the tire and connected with one end of the wire, and a swinging U-shaped plate connected with the other end of the wire, and an axially rotatable pivot-pin connected with the swinging-plate and projecting through the wheel-rim.

No. 529,142.—Method of Making Bicycle Tires. A. B. Shaw, Medford, Mass. assignor to the Self-Sealing Bicycle Tire Company, Portland, Me.

That improvement in forming the joint between the ends of a flexible tubing for pneumatic tires, which comprises turning one end of the tube inside out over a form, drawing the companion end of the tube over said folded portion; again turning the folded end of the tube over the companion end, and cementing the parts together.

No. 529,736.—Pneumatic Tire. Edwin J. Jenness, Chicago, Ill.

The combination is a pneumatic-tire, of an air-tube, an air-tube cover, attached to the wheel-rim, and a protecting cover surrounding the air-cover and its covering, and having embedded therein a series of overlapping transverse strips of steel or other resistant material.

BOOTS AND SHOES.

No. 528,737.—Metal Last. George C. Pettis, New Haven, Conn., assignor to the United States Rubber Company, New Brunswick, N. J.

A last constructed from sheet metal in several parts a portion of the adjacent edges of each part set inward, forming a series of channels between the parts, and the channels filled with brazing materials, whereby they are firmly united.

No. 528,784.—Shoe. Thomas F. Marshall, Oakland, Cal.

A boot or shoe having an elastic gore, and a water-tight lining connected with the shoe by a bellows connection, and elastic strips forming an additional connection between the lining and the shoe.

No. 529,880.—Waterproof Boot or Shoe and Method of Making the Same. Charles W. Shippee, Milford, Mass.

A waterproof boot or shoe composed essentially of an India-rubber upper having a sole integral therewith, a layer of vulcanizable fabric vulcanized to the rubber sole, and extended outwardly for some distance beyond the edges thereof, a filling or intermediate sole, and an outer sole of leather, the edges of the layer of fabric being folded about the edges of the filling or intermediate sole and between the sole and the outer sole, and fastenings extended into and uniting the fillings or intermediate sole and the outer sole.

No. 529,881.—Waterproof Boot or Shoe. Charles W. Shippee, Milford, Mass.

A waterproof boot or shoe composed of an India-rubber upper and sole having a wide flange, a stay strip vulcanized into the space at the junction of the upper and the flange of the sole, an outer sole of leather, and a welt laid on the flange, the outer sole flange and welt being united by means of fastenings at a point outside the upper.

MECHANICAL GOODS.

No. 528,597.—Hose-Reel. James B. Hunter, Cato, N. Y.

The combination with the reel comprising a base and spring arms mounted thereon, of a box sub-divided into air-chambers, a valve set into the box and connected to a water-main and to the reel, a crank lever, an arm thereon, a push-rod connected thereto and to the valve stem, and a strip upon the reel adapted to engage with the crank-lever when the reel is rotated.

No. 528,726.—Elastic Emery-Wheel. David B. Hyde, Springfield, Ohio.

The combination with an arbor, a flanged sleeve thereon having a removable clamping collar, a wheel-supporting sleeve having stationary and removable collars, and a collar on opposite sides of the wheel, intermeshing projections between the respective collars of the supporting and arbor sleeves to form a loose driving connection, and a rubber ring between the arbor sleeve and supporting sleeve, removable washers arranged at the end of the rubber ring, adapted to compress it as the clamping collar is screwed onto the arbor sleeve, and engaging safety collars between the wheel-sleeve and wheel.

DRUGGISTS' SUNDRIES.

No. 528,701.—Syringe-Valve. Horace D. Taggart, Akron, Ohio.

In a valve for flexible tubes, the combination with a hollow case formed of two parts arranged to be screwed together, of a hollow cone of flexible material cut centrally lengthwise from its apex, and having a radial flange about its base adapted to be grasped between and held by the abutting parts of the case.

INSULATION.

No. 528,741.—Insulating Compound. Oscar Stiles, Omaha, Nebr.

As a new insulating compound, the combination of six parts of alcohol, three parts of shellac, three parts of asbestos, and one part each of mica and alum.

No. 529,412.—Insulated Electric Conductor. John Robinson, Philadelphia, Pa., assignor of one-half to William J. Chaninel, same place.

The herein described insulated electric conductor composed of a wire, provided with a coating of insulating material having a smooth surfaced covering of cotton thereon, a binder of cords or threads in regular sequence wound around the same, and a coating of insulating material permeating the body of the covered and corded wire.

MISCELLANEOUS.

No. 528,583.—Rubber Hand-Stamp. Samuel D. Arnold, John B. Venker, and William L. Barnard, St. Louis, Mo.

As an improved article of manufacture, a hand stamp having its letters or characters mounted upon a flexible type base, a flexible sheet secured to the type base, and having elastic pins integral therewith, and projecting from the upper face of the sheet, the pins being enlarged at their upper ends, and a body to which the enlarged portions of the pins are cemented.

No. 529,119.—Combined Cap, Pillow, and Life-Preserver. François Frank, Chicago, Ill.

An article of wearing apparel in the form of a cap, which is adapted to conversion into a pillow and life preserver, consisting of an outer crown section, and an inner lining section, which is adapted to fold into and out of the crown section, the sections connected to form an air-tight bag, with a circumferential depression midway to the length thereof.

No. 529,146.—Coupling for Water-closet. William Vanderman, Willimantic, Conn.

In a coupling for water-closets, the combination of the horn of the bowl, with a flexible connection having an elastic flange, for resting against one end of the horn, and elastic screw threads for holding the flange in engagement.

No. 529,260.—Car-Fenders. Elie B. Graft, Baltimore, Md.

A car-fender composed of a frame work having two side bars each made in one piece, one portion of each side bar being bent to a vertical position, and the other portion to a horizontal position, the vertical portion having its lower end connected to and continuous with the rear end of the horizontal portion, and coiled at this point into one or more convolutions to form springs, a cross bar at the front end of the horizontal portion provided with a hollow elastic cushion, and another elastic cushion arranged at the top of the vertical portion.

No. 529,727.—Vulcanizable Compound. William Griscom, Jr., Bound Brook, N. J., assignor to the Standard Paint Company, New York, N. Y.

An elastic compound consisting of animal fat, candle tar, and sulphur hardened by vulcanization.

No. 528,728.—Vulcanizable Compound. William Griscom, Jr., Bound Brook, N. J., assignor to the Standard Paint Company, New York, N. Y.

The vulcanizable compound hereinbefore described, composed of substantially equal parts of animal fat, candle tar, and a residual product from petroleum distillation, and sulphur, in proportions of from two to eight per cent. of the mass.

No. 529,730.—Hard Vulcanized Compound. William Griscom, Jr., Bound Brook, N. J., assignor to the Standard Paint Company, New York, N. Y.

A hard vulcanized compound, composed of candle tar, sulphur, petroleum residuum, and finally divided solid matter.

TRADE-MARKS.

No. 25,487.—Rubber Boots, Shoes, Coats, and Other Clothing of Rubber or Rubber Compounds. Lambertville Rubber Company, Lambertville, N. J. Filed Oct. 18, 1894.

Essential feature.—The word "Snag." Used since December 16, 1886.

No. 25,488.—Rubber Boots, Shoes, Coats, and Other Clothing of Rubber or Rubber Compounds. Lambertville Rubber Company, Lambertville, N. J. Filed Oct. 18, 1894.

Essential feature.—The word "Snags." Used since December 16, 1886.

No. 25,489.—Mechanical Rubber Goods. Revere Rubber Company, Boston, Mass. Filed Oct. 11, 1894.

Essential feature.—The representation of a man upon horseback. Used since September, 1894.

No. 25,490.—Mechanical Rubber Goods. Revere Rubber Company, Boston, Mass. Filed Oct. 11, 1894.

Essential feature.—The word "Beacon." Used since February, 1892.

KONGO AT THE ANTWERP EXHIBITION.

NO such incompleteness as marred many departments of the recent Antwerp exhibition could be charged against the Kongo section. Here were to be seen a Kongo village, illustrating the native people and their customs, and a Kongo building, filled with products of the new African state. A correspondent writes from Antwerp that Kongo commerce has already felt a beneficial effect from the thoroughness and intelligence with which this display was planned and carried out. There are 173 separate exhibits in this department, and they showed well in the distribution of diplomas and medals. India-rubber naturally occupied a position of importance among the products shown. Many large Belgian concerns are actively engaged in the Kongo trade, supporting a semi-monthly steamer service between Antwerp and Boma, at the mouth of the Kongo river. It is asserted that a good opportunity exists for the development of American trade in this part of Africa, it being an easy matter to ship goods from New York, whence direct reshipment to Boma can be made.

MORE ABOUT "MANGABEIRA" RUBBER.

THERE are continued reports of a growing interest in Brazil in mangabeira rubber. The *South American Journal* (London) has a Rio de Janeiro letter from which we quote:

"The extraction of rubber from the 'mangabeira' promises soon to attain the dimensions of a great national industry. One of the principal difficulties hitherto has been the want of means of communication, but the extension of the Bahia Central railway, now open for traffic as far as Queimadinhas, has opened up a rich district in which the plant abounds, and it is proposed to lay down branch lines from Queimadinhas to the various centers of production. The cultivation of the 'mangabeira' promises to become an important industry. In order to prevent wholesale destruction of the plants, it is necessary to leave the roots in the soil, and to create new plantations of the trees for future years. The price of first-class rubber from the interior has risen gradually, and is now quoted at about 34$500 per 15 kilos [about 24 or 25 cents a pound]."

But the receipts of Mangabeira rubber in the world's markets give no evidence of an increased production. The arrivals in New York during twelve months ending with November, 1894, were 284,000 pounds. It is probable that the arrivals for the calendar year 1894 reached 300,000 pounds, and the arrivals at Hamburg and Liverpool are estimated at about as much more —or a total production of 600,000 pounds. This, by the way, was the estimated production as far back as 1889.

"Mangabeira rubber ranks low in the markets, or about the same as the cheaper Gambia," said a member of the firm of Earle Brothers, New York. "All our manufacturers use Pará rubber, more or less; about 70 per cent. use Africans, and about 15 per cent. some mangabeira. For many purposes it is not as serviceable as some of the African grades that can be bought here for less money. Unless manufacturers understand fully the use of mangabeira rubber it is likely to prove a dead loss on their hands. All the rubber that comes from the lower states of Brazil is not from the mangabeira tree. The produce of the streams that flow into the Atlantic is generally of this class, but the rubber from all streams emptying into the Amazon is analogous to Pará rubber, if not identical with it. This includes what is classed in English markets as Matto Grosso rubber and is known in New York as 'virgin slab.' It sells for only a little less than fine Pará. The rubber to which your late reports relate, however, appears to be of the mangabeira sort alone."

TO THE EDITOR OF THE INDIA RUBBER WORLD: Respecting the claim of Mr. S. S. Schindler to have discovered the mangabeira (*Hancornia speciosa*) to be a rubber-producing tree, as mentioned in your issue of December 10, I think it may be shown that the same tree had other discoverers prior to 1884, the date mentioned by Mr. Schindler. Now I know nothing of this gentleman, and have no interest in depriving him of any credit which may be his due. But I remember seeing several specimens of mangabeira rubber from Brazil at the Philadelphia Centennial Exhibition, in 1876, and the exhibitors of the gum circulated a favorable report on the same from the judges at the Vienna Exhibition of 1873, where it had been shown. Furthermore, as far back as 1855, the Chevalier De Claussen communicated to the British Association, in an account of his investigations as a botanist in Brazil, a note on the mangabeira rubber-tree (*Hancornia speciosa*). It is harder than most people would think, to find anything new under the sun in the way of India-rubber.

S. C. T.

Philadelphia, December 18, 1894.

A RUBBER SWIMMING DEVICE.

A FRENCH inventor has given to the world a device, which, according to the published reports will teach any one to swim. The original part of the device is, perhaps, its adaptability to any conditions, in other words, people in learning to swim need not go near the water. The apparatus is composed of a rest for the chin and support for the chest, while the hips

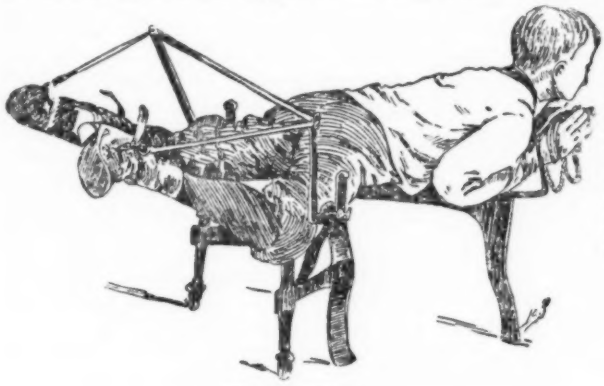


FIGURE 1.—READY.

are held up by bands connecting with the feet. It rests upon a tripod, the support for the chin being attached to the foremost leg of the tripod while that for the chest is between the three legs. This attachment gives perfect liberty to the arms and limbs. The hips are relieved by elastic bands extending from the two uprights down to the heels and so adjusted on hinges as to turn with their support at each movement of the limbs. The supports for the chin, chest and hips are furnished with cushions to render them more comfortable. In front of the chin support is a ring to which are attached two bands of strong rubber terminating in a sort of manacle that encircles the wrists. A strip of rubber from the right foot after passing through the eye of the upright is attached to the top of the companion upright on the left side, while the rubber from the left foot goes in the same way across to the right. It is said that the invention is to be adopted by various French schools and further that at the end of a series of six lessons of one-half hour each, boys have been conducted to a pond in the grounds

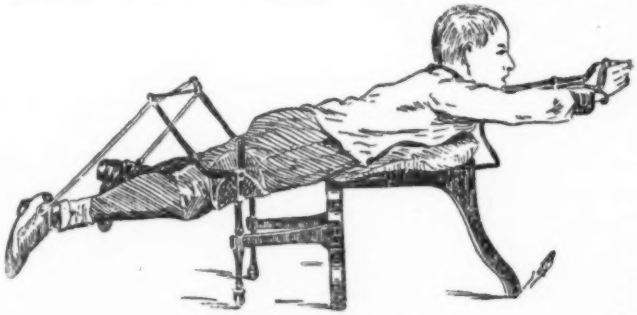


FIGURE 2.—THE FIRST MOTION.

of the Lyceum and every one of them swam from one side to the other with perfect confidence.

When a learner is placed on the contrivance he rests for the most part on the support provided for the chest and the smaller one provided for the hips, holding his head aloft by the support for the chin. The elevation of the chest is above that of the stomach, and thus affords free respiration. One can lie for fifteen minutes in this position without fatigue. The learner then attaches the rubber bands to his feet and at the same time takes the manacles in his hands. Then he places himself in the position shown in Figure 1, with his hands drawn up beneath his chin and the palms of the two touching; at the same time the legs are slightly drawn up and the feet brought together. At the first signal he plunges forward and backward at the same instant, as shown in Figure 2. The hands are thrown well forward, always being kept palm to palm. The legs are thrown backward, the action of the rubber bands forcing the toes to point downward, as they should in making the stroke. At the second the hands are held flat, with the palms turned downward, and the legs are brought closer together. At the third the hands are forced powerfully apart and spread out in the form of a quarter circle, and after reaching a point on a line with the shoulder they are brought quickly back into the original position under the chin. Simultaneously with this the legs are slowly drawn from their straightened position back into the pose they originally had, as shown in Figure 1.

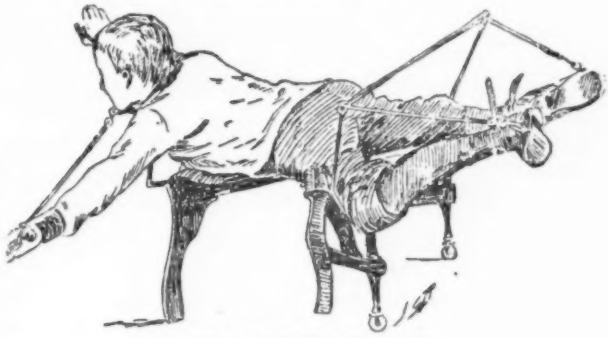


FIGURE 3.—FINISHING THE STROKE.

NOTES ON RUBBER IN INDIA.

ABOUT a year ago an inquiry with regard to the caoutchouc production of the Madras presidency, in southern India, was begun by the mercantile firm of Raju & Co., of Madras city. They obtained specimens from the native trees of the Wynaad—a small district embraced within this presidency and near the Indian ocean—which they forwarded to their correspondents in England, to be experimented upon.

The report they obtained was that the rubber was not of a desirable sort; the most that it might be expected to bring in the London market was 1 penny a pound. It now seems certain that the only native rubber of value in India is that produced in Assam—a province in the extreme north—from the *Ficus elastica*, which was described at length in THE INDIA RUBBER WORLD for October last.

Efforts to introduce South American rubbers have been made in the district above described. There are now under cultivation in the Wynaad rubber trees of the Ceará and *Castilloa elastica* species, some of which are sixteen years old, but the yield of such as have been tapped has been far from satisfactory. The Ceará rubber tree flourishes in Indian soil, however, and its introduction might have progressed farther but for a peculiar reason. The wild pigs have uprooted the young plants in search of the tuberous roots, which resemble fair-sized potatoes. A late writer points out that for the same reason it would be hardly worth while to try to cultivate the Ceará trees on the island of Zanzibar.

THE Monarch Rubber Co. (Campello, Mass.) are adding to their plant a storehouse 38 × 100 feet in size.

"WHAT DOES 'GUTTA PERCHA' MEAN?"

TO THE EDITOR OF THE INDIA RUBBER WORLD: In reply to your note to the communication under the above heading in the November issue of your paper, I must say that I am forced to smile at the blunt answer of "an official." What does he do after the daily boom and roar of his machinery? Is there no literary side to his mill?

I find that, time out of time, the island referred to has been known to the Hindus as Sumatra, which implies "a boundary," "intermediate," or "what lies between." This name is descriptive of the peculiar situation of the island—"intermediate" between two oceans and two straits.

Gutta, in Malayan language, means "tree's sap," or "gum." *Percha* is from a Malayan word signifying "fragments" or "tatters," and it is applied to the broken or intersected land for which the east coast of Sumatra is so remarkable. On the Sumatran coast, nearly opposite the Malayan town of Malacca, there is a particular place of this description named Pulo Percha, or the "Broken Islands." Hence Gutta (Pulo) Percha, or *gum of the island Percha*. This expression is equivalent to our term "island rubber"; then, why not "island gutta"?

JOSEPH THOS. WICKS.

Manchester, England, November 24, 1894.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In connection with N. R. Black's inquiry, "What does 'Gutta-percha' Mean?" in your November 10 issue, it may be of interest to quote from William Marsden's "Dictionary of the Malayan Language" (London: 1812), printed before Gutta-percha was commercially known. I find:

Gatah or *Guttah*—Gum, balsam.

Percha—A remnant, small piece (of cloth), tatters, rags, filters.

The two words connected do not appear in the dictionary, nor yet *gutta-taban* or any of the dozen other terms now applied to the various gums appearing in the market as Gutta-percha. I have seen no conclusion more satisfactory than that the name *percha* was applied to this gum on account of the ragged or tear-like appearance of the sap as it exuded from the trees and hardened on the edges of the incisions in the bark.

Gutta-percha could hardly have gotten its name from Sumatra, because it was first marketed from Singapore island and the adjacent Malay peninsula, and known as Gutta-percha, before the traders in the gum learned of its existence in Sumatra.

William Marsden, by the way, made a careful study of the history of Sumatra, especially with regard to its name, and in his work on the subject, printed in 1783, he said of the inhabitants: "They know not that the country they inhabit is an island, nor have they any general name for it."

A MANUFACTURER'S CHEMIST.

New York, November 19, 1894.

A CHANGE IN THE WERTHEIM COMPANY.

THE Asbestos Works of Mr. Louis Wertheim at Frankfort on the Main, Germany, according to an official report in the *Frankfurter Zeitung* have been transferred to a company with limited liability, which will carry on the business under the name of "Frankfurter Asbest-Werke, Louis Wertheim & Co. m. b. H." The capital of the new company is 1,200,000 marks and their business as heretofore, the manufacture of all descriptions of asbestos goods, packing and insulating materials etc. During the twenty-five years of its existence the firm of Louis Wertheim has acquired a first-class reputation. It owns extensive asbestos mines in Canada, and the manufactured product is shipped to all parts of the world. Its exhibit at the World's Columbian Exposition, Chicago, 1893, was awarded twenty-one first prizes. In their works, which are fitted with the newest and best machinery, the company employ about two hundred hands. Those having innovations or patents in the line of asbestos articles, are strongly recommended to communicate with this firm.

LARGE PRODUCT OF A RUSSIAN FACTORY.

SOME figures authorized by the Russian-American Rubber Co. (St. Petersburg) with regard to the extent of their business indicate that they have a right to be considered one of the great establishments of the world in this line. The figures are for 1891, but it is safe to assert that their business has grown considerably meanwhile. The workmen employed numbered 1486 and the workwomen 1387, making a total of 2873. There were 4,765,000 pairs of "galoches" sold for the equivalent of $5,852,000, and other rubber products to the amount of $1,334,400, making a total return for sales of $7,186,400. The rouble is here converted at 77 cents. Crude India-rubber is imported from England, France, Portugal, the United States, and Brazil. Some of the ingredients used in compounding come from Germany. All the other materials are of Russian origin.

A RUBBER-MAN IN POLITICS.

A PLEASANT sequel to the recent election in Connecticut is reported from the town of Tolland, which has this year three legislators—two representatives and the state senator for that district. One of the representatives, by the way, is Mr. Ratcliffe Hicks, president of the Canfield Rubber Co., who was re-elected. These three gentlemen invited every voter in the town to participate in a non-political gathering at the town hall, where tables were spread for all who came, and speeches were made by Mr. Hicks and the other legislators-elect.

By the way, the *University Magazine*, in presenting to its readers a sketch of Mr. Hicks, says that "few men have better shown, by reason of many achieved successes, the benefit of a university education." After recounting his career as a lawyer and in politics, the magazine article states that under his management the sales of the Canfield Rubber Co. have reached the $1,000,000-a-year mark.

ONE ON INVENTOR LAYMAN.

There was a little man, and he had a little gun,
And some bullets new and bright;
He went out on the brook in his patent ducking boat,
And shot everything in sight.

—*Puck.*

REDUCED PRICES FOR TENNIS GOODS.

TENNIS-SHOES are in decreasing demand, stocks are very light, and prices this season are lower—this sums up the situation for an article of trade which all the rubber factories combined, three years ago, were scarcely able to turn out fast enough for the eager buyers. Neither age, nor sex, nor color was exempt then from the contagion of the new "fad"; now even the southern darkey is getting too proud to do honor to the beautiful sporting shoes about which summer girls raved and poets sang. When the decline began is not a matter of concern now. One cannot say even what sent the tennis-shoe to the rear.

"I wore a pair for a week once," said a man who sold tennis-shoes during the craze by thousands of cases, "but only because I was out where I could get nothing else. I will never put on another pair." Evidently, then, there were people who found them uncomfortable for regular wear, and it was too much trouble to change merely for the sake of having on tennis-shoes during the hours devoted to sports. At the same time makers of leather goods entered the field with competing goods—russet shoes, and combinations of leather and canvas. But whether the tennis-shoe would have continued popular, even in the absence of these, is a question.

The head of one manufacturing company found that the ladies were first to drop the tennis-shoes. No wonder, then, if the men followed suit. Yet the tennis goods have their place, and their season is all the year. They are as desirable for gymnasium use and for some other indoor sports in winter as in the summer.

The National India Rubber Co. will manufacture tennis shoes this year for the whole trade of the United States Rubber Co., making "firsts" and "seconds," but none of the cheaper grades which, as produced by some of the companies, helped perhaps to bring tennis-shoes into discredit. In the price list for the season of 1895, the reduction from last season's figures is from 75 to 70 cents on men's No. 1; from 50 to 45 cents on men's number 2; and in about the same proportion throughout. The list follows:

	Men's.	Boys'.	Y'ths.	Wom'n's	Misses'	Chl'dns.
No. 1—Black, russet, or printed duck, leather insoles, in cartons*.....	.70	.65	.60	.65	.60	.55
No. 2—Black, russet, or printed duck, in bulk..	.45	.43	.41	.43	.41	.39
No. 1—White duck.....	.90	.85	.80	.85	.80	.75
No. 1—Gymnasium. ...	.70					
Balmorals.						
No. 1—Black, russet, or printed duck, leather insoles, in cartons*.....	.90	.85	.80	.85	.80	.75
No. 2—Black, russet, or printed duck, in bulk..	.65	.63	.61	.63	.61	.59
No. 1—White duck, yachting	1.10	1.05	1.00	1.05	1.00	.95

The discount from the list to jobbers is 20 per cent.

Outside of the combined companies, tennis goods will be manufactured this year by Goodyear's India Rubber Glove Manufacturing Co. President Vermeule, of this company, said to THE INDIA RUBBER WORLD representative that his factory would make these goods only on orders. As jobbers and dealers understand this, it may have the effect of causing orders for the bulk of the season's trade to be filed earlier than heretofore.

The Boston Rubber Shoe Co., advise THE INDIA RUBBER WORLD that they will not make tennis goods, as has been reported.

*Also made in black sateen.

THE INSURANCE OF RUBBER FACTORIES.

FOR a long time insurance against fire was more expensive for an India-rubber factory than for a powder-mill. That was in the days when the policy adhered to by the fire-insurance companies was that they had nothing to do with construction methods or other features bearing upon the nature of risks; it was only their business to accept whatever risks were offered them, provided the applicants for insurance were willing to pay the rates demanded. The joint-stock insurance companies have since adopted more business like principles, and one thing that has influenced them to do so has been the action of the rubber-manufacturers about to be outlined.

The business of rubber-manufacture was growing to large proportions in this country, and the property included in the plants had cost a great deal of money, when, nearly a dozen years ago, some of the leaders in the industry—who were paying about 4 per cent. for insurance—held a meeting in Boston to devise some way out of an undesirable situation. The prime mover in this rebellion against the tyranny of the stock companies was Eugene H. Clapp, of Boston, who issued the call for a meeting of the rubber-manufacturers, which was held at No. 131 Devonshire street, in the office of the Cotton and Woolen Manufacturers' Insurance Co. The date of this memorable meeting was October 30, 1884. There were present George H. Hood, of the Boston Rubber Co.; Isaac P. T. Edmunds, Treasurer, and James Bennet Forsyth, General Manager of the Boston Belting Co.; Elisha S. Converse, of the Boston Rubber Shoe Co.; Eugene H. Clapp, of the E. H. Clapp Rubber Co.; Robert D. Evans, of the American Rubber Co.; Wheeler Cable, President, and Freeman Wight, Treasurer, of the Cable Rubber Co.; Henry C. Morse, of the Revere Rubber Co.; Benjamin F. Taft, and Benjamin Taft, of the Cotton and Woolen Manufacturers Insurance Co. These gentlemen to use the terms expressed in the charter, formed "a corporation under the name of the

Rubber Manufacturers' Mutual Insurance Co., for the purpose of transacting the business of insurance against loss or damage by fire upon manufacturing property and buildings and stock, and especially rubber-manufacturing property and buildings and stock, upon the principle of a purely mutual fire insurance company." The incorporation occurred on November 4, 1884, and the new company commenced business on January 15, 1885.

The officers elected were E. S. Converse, president; E. H. Clapp, vice-president; Benj. F. Taft, secretary and treasurer. The directors were those whose names appear as incorporators, with but two exceptions, Benj. Taft, and Freeman Wight resigned to make way for Joseph Banigan, of the Woonsocket Rubber Co., and Henry L. Hotchkiss of the L. Candee Rubber Co. After the death of E. H. Clapp, to whom the company owes so much, Benj. F. Taft was elected as vice-president. The board of directors at present are E. S. Converse, Henry C. Morse, Joseph Banigan, Wheeler Cable, George H. Hood, O. H. Sampson, H. L. Hotchkiss, E. B. Page, James B. Forsyth, B. F. Taft, Robert Batcheller, George F. Hodgman, Marcus Beebe, Benj. Taft and Arthur W. Clapp.

The Rubber Manufacturers' Mutual Insurance Co. have insured plants in almost all lines of soft rubber manufacture, its preferences seeming to run in the line of boots and shoes, mechanical goods, and clothing. The larger part of their risks are probably to be found among the rubber shoe manufacturers, whose goods are scheduled as soft rubber, while other rubber goods except mackintoshes are called *hard* rubber. A very important reform introduced at the outset of the growth of fire insurance companies on the mutual plan was that, instead of taking the factory plants and their contents as they stood, and basing the cost of insurance upon all the dangerous elements involved, those elements were as far as possible removed, and defects in construction were remedied. When this had been done to the rubber-factories, the liability to fire had been so lessened that the joint-stock companies were willing to reduce their rates to a very marked degree. The president of one of the largest rubber-manufacturing plants in the country asserts that his annual expenditures for repairs and renewals of plant do not exceed the saving in insurance, when the new and the old rates on his factory are compared. Had the old-style companies appreciated the situation earlier, and have set to work to point out to rubber-manufacturers what made their plants dangerous risks, and how the danger of fires might be lessened, there probably never would have been a Rubber Manufacturers' Mutual Insurance Co.

The Rubber Manufacturers' Company, however, are not organized on a sufficiently large scale to afford the members all the insurance they require upon their plants, and the additional insurance is now placed with outside companies at rates based upon the improved conditions in such plants. Inflammable substances, for instance, are so placed as to cause the minimum of danger, and extra precautions are taken to provide an abundant supply of water for extinguishing fire should it break out anywhere. As a result of all this work a rubber-factory to-day ranks among the most desirable risks in the manufacturing field. While not prepared to cover all the insurance needed by the immense rubber-factories, the Rubber Mutual company have begun to accept risks on factory plants outside their own line of business. The company have a most flattering record for light losses during their ten years of existence.

BENJAMIN FRANKLIN TAFT.

The latest published report of the Massachusetts State insurance department covers the business of the Rubber Mutual company for 1893. At the end of that year the amount of insurance in force in the company was $17,889,976, while the losses incurred during the year had amounted to only $110,815.58. The gross cash income during the year had amounted to $172,629.12.

BENJAMIN FRANKLIN TAFT.

ANY article on the Rubber Manufacturers' Mutual Insurance Co. would be incomplete without a sketch of Mr. B. F. Taft, who has been so closely identified with the organization from the beginning. He was one of the original list of officers, and as he now holds the offices of vice-president, secretary, and treasurer, it may be assumed that he has been, and is, a most substantial factor in its career of success.

Benjamin Franklin Taft was born in Northbridge, Mass., August 17, 1823. He was the son of Benjamin and Syrena (Batcheller) Taft. His father was a carpenter. He lived at home until he was fifteen years old, when he went to Boston and worked in a store situated at No. 42 Han-

over street. He stayed there three years. At the age of twenty-one he bought a country store at Spencer, Mass. His health failed while there and he moved to New Bedford and bought a store, remaining there three or four years. He then went to Worcester as clerk for Willard Branch & Co. and while there invented a wrench and went to Wilkinsonville, Mass., to manufacture it. At that place, on July 3, 1849, he was married to Caroline E. Whiting, sister of William B. Whiting, the veteran vice-president of the Boston Manufacturers' Mutual Fire Insurance Co. Leaving Wilkinsonville he went to Charlestown as superintendent of the Charles River Planing Mill and from there went to South Groton (now Ayer) in 1853 to carry on the same business. The firm failed and he was employed by Nourse, Mason & Co., afterwards Ames Plow Co., as superintendent of works, where he stayed thirty years. When this firm moved their works to Worcester he went to West Acton to manufacture wooden-ware such as pails, tubs, and churns. This move was not a successful one and he returned to Worcester to again take his position as superintendent of the Ames Plow Co. From there he went to Boston in 1876 as secretary and treasurer of the Cotton Manufacturers' Insurance Co.

Mr. Taft is the father of four daughters and one son, the last named being one of the directors in the Rubber Manufacturers' Mutual Insurance Co., and associated with him in its management. Personally Mr. Taft is a large man, positive, kindly, and an acknowledged expert in insurance matters. The portrait presented with this article is the first one of Mr. Taft that has ever been published.

LITIGATION OF THE DERBY RUBBER CO.

THE Derby Rubber Co. was incorporated on January 31, 1889, to conduct the business of reclaiming rubber at Derby, in the town of Huntington, Conn. The capital stock was $20,000 and the incorporators, with the number of $25 shares held by each, were V. A. Page (520), W. F. Askam (200), Robert N. Bassett (40), and Royal M. and Theodore S. Bassett (40). The three first named were directors of the company. On May 9, 1891, the Rubber Reclaiming Co. was incorporated under the laws of New Jersey, being in effect a combination of the five different rubber-reclaiming establishments in the United States, including that at Derby. The capital stock was $200,000, divided among the stockholders of the five old companies in proportion to the value of their plants and business, which arrangement gave to the Derby Rubber Co. $184\frac{8}{16}$ shares (about $18,500). Under the anti-trust laws of Connecticut the Derby company could not legally, as a corporation, hold stock in the Reclaiming company, and to obviate this objection Royal M. Bassett, of the Derby company, was chosen by the stockholders of the latter as trustee to hold their shares. Among the incorporators of the Rubber Reclaiming Co., therefore, appears the name of Royal M. Bassett, with 168 shares ($16,800).

At the annual meeting of the Derby Rubber Co. following the arrangement above described, it was demanded that Trustee Bassett should sign an agreement to vote the stock in the Rubber Reclaiming Co. as might be desired by the holders of the majority of the stock in the Derby Rubber Co., they being the real owners of the shares. Mr. Bassett signed the contract, but upon his failure to comply with its terms, as was alleged, he was deposed and Dana Bartholomew was elected trustee. Bassett declined to recognize his deposition as legal and secured an injunction restraining Bartholomew from voting as trustee at the annual meeting of the Rubber Reclaiming Co. Similar injunctions were secured by stockholders of the latter company in New Jersey. Bartholomew attended the meeting, however, and voted the shares which he held as trustee, after which an application was presented to Judge T. B. Hall, at Bridgeport, Conn., asking that he be adjudged in contempt. Upon the day assigned for a hearing Bartholomew appeared and showed why he should not be adjudged in contempt. No order was made by the court, as the party making the application withdrew it.

This litigation, which occurred in 1892, ended in a complete defeat of the Bassett interest. At that time Royal M. Bassett was president of the Rubber Reclaiming Co. After the dissolution of the injunctions which had given the Bassetts a temporary advantage, all the parties interested met in New York, when it was agreed that N. Chapman Mitchell should be elected president and Royal M. Bassett vice-president, on the understanding that he should resign within a few months—an arrangement to prevent the appearance of an unceremonious retirement of Mr. Bassett. At the succeeding annual meeting, at which this agreement was ratified, Dana Bartholomew voted the shares of the Derby company because it had been agreed that he should do so, and at the same time he was elected secretary.

The situation remained unchanged until the death of Robert N. Bassett, whose stock had controlled the balance of power in the Derby Rubber Co., and who had uniformly voted with Bartholomew and against the other Bassetts. His administrators, being friends of Royal M. Bassett, reversed the situation, and upon their petition the courts issued a writ of mandamus ordering a special meeting of the stockholders of the Derby Rubber Co. to elect additional directors. When the mandamus proceedings were returned to court, a motion was filed in behalf of the Derby Rubber Co. to quash the writ upon the ground that the case was one in which a mandamus would not lie, but that a suit in equity would be the proper procedure for the accomplishment of the purpose desired. The court quashed the writ, whereupon the plaintiffs appealed to the Supreme court, where no decision has yet been reached. Thereupon the Bassetts procured an injunction in the courts of New Jersey to restrain the holding of the annual meeting at the time named, and the stockholders (Bartholomew voting with them) adjourned the meeting until December 17, by which time it was hoped that the case in the Supreme court would be disposed of.

Meanwhile a meeting was held on June 28, 1894, upon a call signed by Bassett and the other stockholders, at which time Theodore S. Bassett was selected as trustee instead of Dana Bartholomew. The latter, with his friends, at once secured an injunction restraining Bassett from voting at the annual meeting of the Rubber Reclaiming Co., to be held in New York on July 2.

On September 25 Bartholomew's counsel applied to one of the Connecticut courts for a mandatory injunction compelling Royal and Elizabeth Bassett and others to withdraw the injunction suit in the New Jersey court, but before the day for making a return the parties named withdrew the New Jersey suit. A few days before December 17 the same parties applied to

Judge Wheeler, of the Connecticut Superior court, for an injunction to prevent Bartholomew from voting at the annual meeting of the Rubber Reclaiming Co. on that date, or at any other meeting, until the Supreme court should decide the mandamus case, but this was successfully resisted, after which the Bassett interest gave up their contest. Bartholomew voted at the meeting as trustee of the Derby Rubber Co., and officers were elected to serve until July next—the regular date for the annual meeting.

In the event that the Derby Rubber Co. should now elect a trustee in place of Bartholomew, it is said that there will be three directors in the Rubber Reclaiming Co.—Messrs. Loewenthal, Murray, and the Derby trustee—on one side, and three —Messrs. Mitchell, Solliday, and Schneller—on the other. Neither party, in that case, can control the policy of the company. "This is a queer result," remarked one of THE INDIA RUBBER WORLD'S informants, "but it is according to the law of New Jersey, and is the result of the cumulative system of voting."

AUSTIN G. DAY'S ESTATE IN COURT.

THE estate of the late Austin Goodyear Day, the inventor of the "Kerite" insulating compound, is involved in a suit brought in New York to contest the will of his widow, Sarah Ann Day. At the time of Mr. Day's death, in December, 1889, he was supposed to be wealthy, as the result of the manufacture of insulated wire at Seymour, Conn. By his will three-fourths of his estate was to go to his widow and the remainder to his friend and associate in business at Seymour, Alvah G. De Wolf. It was found, however, that the profits of the business had disappeared in a railroad venture and other outside investments, so that only about $150,000 remained, with claims of creditors almost equal to this sum. Mrs. Day accepted the administration of this complicated estate, relying upon the assistance of her brother, William R. Brixey, who for twelve years had been connected with the works. Some of the claims she regarded as fraudulent and, on advice of counsel, in 1891, she offered for sale the patents and other assets of the business, including good will, the proceeds to constitute the total fund for such creditors as should properly establish their claims. The properties at the sale were bid in by her brother, Mr. Brixey, with whom she then organized a new firm to carry on her late husband's business. At the same time Mrs. Day made a will giving all her property to her brother, to the exclusion of several sisters in England, who now contest the will on the ground of undue influence and actual fraud, the latter claim being based upon the contention of counsel that, since the sale was by an understanding that Mrs. Day was to be interested in the new business, it was void as proving a bar to creditors. Medical testimony is introduced to prove the death of Mrs. Day to have been caused by a brain affection, rendering her incapable of making a will, and therefore susceptible to undue influence. The defendants, however, assert that Mrs. Day gave large presents to other members of her family during her lifetime, while the doctors are not agreed as to the alleged brain trouble.

INDIA-RUBBER LEGAL CASES.

THE plant of the National India-Rubber Co. (Bristol, R. I.) was not sold at auction on December 10, to satisfy certain mortgage bondholders, in behalf of the Rhode Island Hospital Trust Co., as was advertised previous to that date. On November 27, a bill in equity was filed in court at Providence in behalf of The National India-Rubber Co., against the trust company named, W. R. Grace & Co., and J. Lewis Schaeffer, to enjoin the sale. It sets forth that there are now outstanding forty-two bonds (amounting to $24,000) of an issue dated July 22, 1884, secured by a mortgage upon the plant of the old National Rubber Co., now in possession of the National India-Rubber Co. It is claimed that Schaeffer, who asserts that he is the present holder of the bonds, is an employé of W. R. Grace & Co., and that if he does hold the bonds, it is without the payment of any consideration therefor. It is further claimed that thirty-one of the bonds (amounting to $15,500) were originally issued to W. R. Grace & Co. as collateral for an account which they held against the National Rubber Co., and that Grace & Co. have since become indebted to the rubber company in a larger amount than $24,000, and that the rubber company now have a suit pending in New York to recover what is due them in excess of this amount. It was upon the request of Schaeffer that the sale was ordered by the trust company, on account of the default in payment of the coupons. At a hearing on the rubber company's petition President Samuel P. Colt said that the interest had been paid on the other bonds outstanding ($75,500), but that it was the intention of his company to withhold payment on the Grace bonds. The sale, as already stated, did not take place, but the result of an application for a permanent injunction has not been learned.

IN September, 1890, Patrick Shea was employed by the Glendale Elastic Fabric Co. at Easthampton, Mass. After working five weeks he was taken ill with symptoms of lead-poisoning. When he recovered he brought a suit against the company, for $10,000, alleging that he contracted lead-poisoning from inhaling dust containing white lead, coming from the rubber thread on which he worked, and that he did not know the danger to which he was exposed. In the superior court he secured a verdict for $4000. The defendant excepted to the admission of evidence that other employés of the mill working with the plaintiff at the same time were also ill from lead-poisoning, and evidence that persons employed there before and after the plaintiff's sickness were poisoned. The supreme court overrules the exceptions and says the evidence was admissible.

AT Sandusky, Ohio, the Rubber Manufacturers' Selling Co. (Providence, R. I.) have filed suit against the administrator of the estate of the late J. T. Johnson for $26,406.03, with interest from January 1, 1894, upon an account for goods sold and delivered to Wilson W. Walls. The latter was a son-in-law of Mr. Johnson and, with his indorsement, had large dealings with the plaintiff company.

IN the patent-infringement suit of Morgan & Wright *v.* The Eastern Rubber Manufacturing Co., the filing of which was reported in this journal in November, the defendants on December 3, submitted an answer through their counsel, John R. Bennett, of New York. The patents involved are Nos. 490,035 and 502,047, relating to alleged improvements in pneumatic tires and processes in their manufacture. By way of answer, the defendants deny "upon information and belief," that Morgan & Wright were, as claimed, the original inventors of the processes described, and file references to numerous American and foreign patents of prior date in which the alleged inventions are claimed to have been foreshadowed. It is also asserted, with respect to each of the patents, that features embodied in the devices on which plaintiffs obtained patents were surreptitiously obtained from William Golding, of Manchester, England, while the latter was diligently attempting to perfect a new invention. The parties to the suit are now in readiness to proceed to take testimony.

NEW GOODS AND SPECIALTIES.

IT is a well known fact that a thoroughly high grade pedal is something that the bicycle trade have long wished for. The Waverley, which is turned out in a factory that builds not only bicycles, but that manufactures all of the rubber parts, claims so be just that. The pedal has already found many

friends, and for that reason the manufacturers are now selling it to other makers of wheels, and have already built up a large business in it. The illustration shows the combination so completely that it needs no explanation. The rubber attachments

on either side can be detached by simply unscrewing the side clamp bolt nut. Manufactured by the Indiana Bicycle Co., Indianapolis, Ind.

"IONA" LADIES' MACKINTOSH.

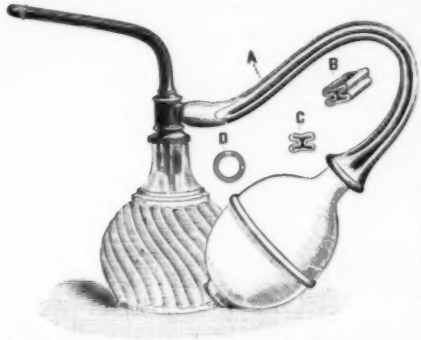
WHETHER or not the golf cape has come to stay is a question that the wisest refuse to answer. At all events it is here, and all are making it. The "Iona" shows it perhaps as well as any. It is, in a word, a full military cape, 36 inches long, and bears what is now known as the golf hood. It usually is made without sleeves, and the cape and hood are detachable, and may be worn without the rest of the garment. A feature in all of these garments this year is the lining, which is made of what are known as "clan plaids." They are made either double or single texture. The "Iona" is manufactured by the Columbia Rubber Co., 85 Beach street, Boston, Mass.

RUBBER SOLES FOR LEATHER SHOES.

EVERY man can be his own shoemaker to the extent of putting on Dykes's "Diamond" soles, as a new article in rubber is called. The idea is to put them on while the soles are good, to keep them from wearing out. They are recommended to prevent slipping, and as a substitute for overshoes except in the worst weather, keeping the leather sole from contact with the cold or wet pavement. Bicyclists, freight brakemen (who have to walk on the roofs of cars), and electric linemen are asked to try them. This device is to be found in many cobbler's shops in New York and is sold at 35 cents per pair. A patent has been applied for by the manufacturers, Dykes & Swann, No. 215 Madison street, Chicago, Ill.

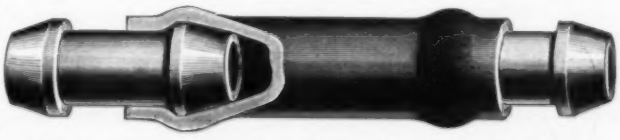
THE ALPHA CONTINUOUS SPRAY ATOMIZERS.

THE principle involved in the accomplishment of the continuous spray as applied to atomizers will be recognized as that so successfully applied to the syringes of the same name by a New York house. It is that of a rubber tube folded together lengthwise and vulcanized in that position. Under pressure it expands and becomes a reservoir, with a considerable and continuous constrictive action. As applied to atomizers an absolutely continuous spray is produced with very little labor. It has a further advantage of continuous work without tiring the hand. The bulb and tubing are made of the best quality white soft rubber, while the atomizing tube and fittings are made of hard rubber. The parts as lettered in the illustration are described as follows: A—A fine rubber tube capable of expansion or contraction laterally. B—Perspective to tube A. C—Cross section of A not expanded. D—Cross section of A expanded. Manufactured by the Alpha Rubber Co., Limited, Montreal, Canada.



THE "LITTLE WONDER" HOSE MENDER.

THE Little Wonder is probably the lowest in price of all the hose menders to-day on the market. It needs no bands or wire to make a perfect joint. All that is necessary is that the ends



of the hose be cut square and the mender be inserted in each end, the result being a perfect joint. It is simple, and convenient, and is made in ½, ¾, and 1 inch sizes. Manufactured by Henry F. Knowles, 49 Federal street, Boston, Mass.

GOSSAMER MUD-GUARDS.

NOW that most wheels are "stripped," the old-fashioned metal mud-guard is viewed with disfavor, as it adds appreciably to the weight of the wheel. For this reason, rubber guards have come into use, and are found especially effective where city or town riding is indulged in. A form of the rubber mud-guard shown in the illustration accompanying this is that made

of gossamer cloth. A point made in its favor by the manufacturers is that it is made of rubber with a cloth backing, is not elastic, and therefore will not stretch out of shape. Further than this it will not cut or tear as easily as a stretched pure gum strip will. It is fitted with sliding buckles by which it is always adjustable. These guards may be attached to any wheel, as they are sure to fit whether the stretch be a long or a short one. The upright, which supports the rear guard, is made telescoping in three sections, so that it can be collapsed, and made into a package that is easily carried in the pocket. Manufactured by the Niagara Cycle Fittings Co., Buffalo, N. Y.

PRESCOTT'S RUBBER HEELS.

IT is a well known fact that policemen and letter carriers almost without exception have rubber lifts put upon the heels of their shoes to do away with the jar caused by excessive walking. Many shoe makers buy different grades of sheet rubber to supply this demand. The Prescott heel, however, is molded of a good quality of rubber and in various sizes to fit different shoes. The point about this and one that is the subject of a patent is that within the body of the rubber is set three washers which act as heads to the screws that attach the lift to the heel and prevent them from working through the rubber. Although no great attempt has been made to push these goods they already have quite a large sale. Manufactured by Prescott Bros., Cornhill, Boston, Mass.

THE BOSTON IMPROVED SPRAY PIPE.

THE spray pipe here illustrated is exceedingly simple and effective and one that has already been largely sold in the trade. It will deliver a fine spray, a rain spray or a solid stream.

The point about it that makes it extremely valuable is that it is almost impossible for it to get out of order. It is made of brass and handsomely finished. Manufactured by the Boston Woven Hose & Rubber Co., Boston, Mass.

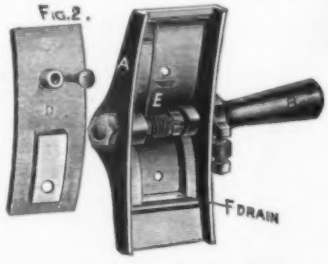
MYSTIC LAWN FOUNTAIN.

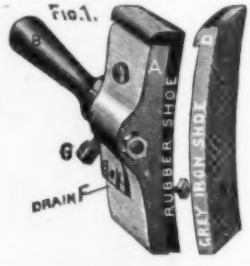
ANOTHER new type of sprinkler is that known as the Mystic. According to the manufacturers it is constructed on scientific principles, so that the wings will neither choke nor clog, and but little pressure is required to revolve them. To throw a full circle the thumb-piece should stand at a perpendicular, and for half a circle it should be horizontal. The sprinkler is set upon

a sled which enables it to be moved about the lawn by the hose, or by a cord attached to the rear of the sled. In case the holes get clogged from impurities in the water, the thumb-piece can be taken out and the sprinkler readily cleaned. Manufactured by F. E. Kohler & Co., Canton, Ohio.

RUBBER SHOES FOR BRAKE-BLOCKS.

MANY details have to be considered in the construction of a really good brake-block for vehicle-wheels. The amount of grip upon the tire and of the rack upon the gear are items of importance; besides, different classes of wheels have different requirements, and present the manufacturer with the opportunity for a choice of materials. India-rubber is being used successfully for shoeing a brake-block which is shown in the illustration. It has proved to be specially adapted to use on carriages, surreys, buck-

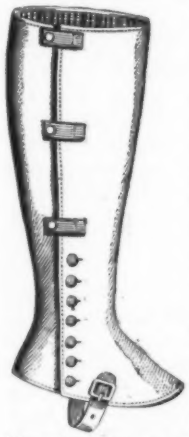




boards, and hearses, where noise is an objection. The shoe is made of molded vulcanized rubber; it is attached without bolts, and in such a manner as to secure even wear until it is worn through. For business purposes the same block is provided with soft gray iron shoes. In the illustration Figure 1, the complete brake-block appears, showing both India-rubber and iron shoe. In Figure 2 the cover-plate (*C*) is shown removed from the shell (*A*) and turned over to show the boss for the threaded brass screw. *E* is the coil-spring and *F* the channel for drainage. The manufacture of these goods was begun in a small way in 1887, and as it has increased new features have been added and new patents applied for and obtained. Manufactured by Morgan Potter, Fishkill-on-Hudson, N. Y.

THE CLEANFONT NURSING BOTTLE.

THE "Cleanfont" is one of the most practical inventions in the line of nursing bottles that has yet been brought out. The illustration shows very clearly what the invention is. Its object is simply to keep the baby from drawing air instead of milk, from the bottle. To do this a vent is placed at the farther end which prevents a vacuum being formed and keeps the milk up at the nipple end. The vent is made of pure rubber and is even more simple in construction than the ordinary nipple. A further advantage is that the nipple and vent can be taken off from the respective ends of the bottle allowing it to be easily and thoroughly cleaned. Manufactured by Fox, Fultz & Webster, 18 Blackstone street, Boston.



AN ADJUSTABLE MACKINTOSH LEGGING.

THE proprietor of a prosperous rubber store in Lynn, Mass., has put upon the market a ladies' mackintosh legging which is here illustrated. As it is made to button at the ankle like the regular gaiter it presents a very neat appearance. The upper part is made with three elastic straps, fitted with ball and socket fasteners so that it is adjustable to the leg, thus fitting far better than where the button or strap alone is used. This legging is already sold largely through New England and is gaining many friends. It is made of double texture cassimere and serge goods and is perfectly waterproof. Manufactured by Oliver R. Howe, 50 Central square, Lynn, Mass.

THE TYRIAN SEAMLESS NIPPLES.

A NEW departure in druggists' sundries is that here illustrated and is in the line of seamless rubber nipples. They are made in all the standard shapes and have an absolutely smooth surface,—that is they are not ribbed or corrugated on the outside, as was the old fashioned style. They are made of the best quality of white, black, or maroon rubber, and are manufactured by the Tyer Rubber Co., Andover, Mass.

BAILEY'S RUBBER BUBBLE BLOWER.

BAILEY, the irrepressible, is before the public this month with a novelty in rubber that is going to sell like hot cakes. It is a toy to be sure, but it is right in line with one of the ancient pastimes, that of blowing bubbles. How many clay pipes are purchased for this purpose every year no one knows, nor are there accurate statistics concerning the number of "kids" that stick the stems into each other's eyes, sit down on them and break them, or pick up smoking on the sly through the clay bubble-pipe. The Bailey rubber bubble blower beats the clay pipe out of sight. It is of white rubber, is soft, cleanly and absolutely unbreakable. It is sent postpaid anywhere in the United States for 10 cents. Manufactured by C. J. Bailey, 22 Boylston street, Boston, Mass.

THE NEW TILLINGHAST TIRE.

THIS tire was invented by P. W. Tillinghast, who designed it to overcome existing defects in detachable tires. They are liable to be injured by the cutting of the bead at the edges of the rim, while the outward hooking or pressing of the bead required a wide rim, which when made of wood gave the wheel a heavy and clumsy look. It is claimed that Mr. Tillinghast's improvements have secured to the rim edge an almost complete relief from the outward pressure of inflation by the inwardly turned beaded edges of the tire hooking under a metal band. This allows of the use of a very light and narrow wood rim, and results in the saving in weight of nearly three pounds per pair, including rims. Another advantage is in having all of the air space above the rim, giving a greater cushioning action for the same size of tire.

The danger of cutting on the rim edges is removed by the peculiar construction of the beaded tire edges, the outer surface of which is rounded, following the arc of a true circle. This curved shape extends above the rim when the beads are inserted, and as the beads can only move in curved pathways, it follows that the flexible side wall of the tire, or even the bead, can never come in contact with the extreme edges of the rim.

The device consists of the usual parts, viz.: Rim, air tube and sheath. The improvement makes it possible to get at the inner tube, which contains the air, and readily repair any puncture that may be made in the tube. With the Tillinghast detachable tire upon a bicycle, it is claimed that the rider is reasonably sure of not having to walk home, or to seek conveyance for both his wheel and himself. This was illustrated by the experience of a wheelman who punctured his tire, and, being without the usual means of repair by cementing and patching, he was able by the use of an ordinary postage stamp, placed over the injury, to make a temporary repair and continue eight miles.

The object of this most recent invention can be briefly stated thus: "To construct a tire that can be easily removed and replaced by an unskilled person, without special tools and appliances, and without disturbing any part of the wheel rim." This object is attained by forming recesses in the edges of the rim, with contracted openings for the reception of the beaded edges of the sheath, the beaded edges being introduced into the recesses by turning the bead in a curved pathway through the contracted openings. In this manner a part only of the molded bead is presented to the opening at one time, and the turning of the bead during its insertion will swing it into place under the metal band, as if pivoted to the edge. A greater part being then presented to the opening prevents its withdrawal, except by a reversal of the movements of insertion. After the sheath is in place and the inner tube is inflated, the sheath is held securely on the rim, and can be removed only by deflating the tire and partially turning the bead as in the manner of its insertion. Manufactured by the Tillinghast Mf'g. Co., 117 Orange street, Providence, R. I.

THE LITTLE WONDER SPRINKLER.

A NEW lawn sprinkler that has many points of special excellence is that here described and illustrated. It has no revolving parts and therefore should be more durable than one in which there is a chance for wear or for the parts to get out of order. It throws a beautiful spray and the spread can be easily regulated by varying the hydrant pressure. A point in its favor is that the spray is equally good whether the pressure be light or heavy. The sprinkler is exceedingly simple, effective and cannot choke or clog. It is nicely finished in nickel and is of very low cost. Manufactured by the Peerless Rubber Mfg. Co., 16 Warren street, New York.

ALL THE NEW TIRES WILL BE THERE.

BICYCLES will be the center of attraction at Madison Square Garden, New York, for one week, beginning Saturday evening, January 19. The occasion will be the "First National Exhibit of Cycles, Cycle Accessories, and Sundries," under the auspices of the National Board of Trade of Cycle Manufacturers. Certain regulations adopted by the board will, it is believed, result more satisfactorily to competing exhibitors than the former shows have done, where each exhibitor was a law unto himself in his own space. But the utility of the show as a whole has been questioned by some. "I go into it because my competitors do," said one manufacturer to THE INDIA RUBBER WORLD man, "and not because it does me any good. These shows, held in January, hinder trade for a considerable time preceding, besides which they cost us more than any resulting advantage amounts to. The trade have ample opportunities to get acquainted with everything new in wheels and tires without going to Madison Square."

Among the 101 exhibitors listed, to occupy 163 stands, the India-rubber companies are well represented. The New York Belting and Packing Co. (stand 20) will exhibit their new "League" inner-tube tire, for which superiority is claimed in respect to strength and elasticity of fabric, due to the processes in manufacture. Their last year's "Whippet" tire will also be shown, together with inner tubes in boxes, and a new repair outfit called "Stick and Stay" sundries. The Schrader valve has been adopted for the company's tires this year. One feature of the "League" tire, by the way, is its light weight for road use—2¾ to 3¾ pounds, according to size.

The Columbia Rubber Works Co. (stands 36, 37) will exhibit the Perkins detachable wire tire, and also the "Palmer," "Akron," and "G. & J." tires, manufactured by the B. F. Goodrich Co. (Akron, Ohio). They will exhibit also the "Simplicity No. 47," which they have recently been licensed to manufacture in grey rubber.

The Mechanical Fabric Co. (stand 154) will show the "Flexifort" tire, in the weights for 1895, that for the 28" × 1¾" road tire being only 3 pounds per pair.

Other firms manufacturing tires who have secured space are the Pope Manufacturing Co. (stands 38, 85, 93, 94); Boston Woven Hose and Rubber Co. (stand 138); Newton Rubber Works (stand 16); Morgan & Wright; Elliott Burris (stand 6); Indianapolis Rubber Co. (stand 160); Mechanical Rubber Co. (stand 17); Eastern Rubber Manufacturing Co. (stands 24, 25); and the American Dunlop Tire Co. (stands 7, 8).

RUBBER TIRES AT THE ENGLISH SHOWS.

IN its report of the recent Stanley Cycle Show, in London, *The Times* says that there were 362 exhibitors and 1300 bicycles, including many of foreign make. The display of tires, as usual, was large and varied, and included this year several exhibits showing the increasing adaptation of the pneumatic tire to broughams and other carriages. Thomas Lough, M. P., one of the speakers at the opening ceremonies, said that the trade in bicycles in the United Kingdom now amounted to $5,000,000 a year, having increased $150,000 during the past year.

From the bicycle journals it is learned that there was only one American among the foreign exhibitors,—the Union Cycle Manufacturing Co.,—unless John F. Palmer be included, he having brought out on the other side a new detachable tire. *The American Wheelman* says that but for the large number of pneumatic-tired vehicle exhibits there would have been a falling off in the space occupied at the Stanley show.

The figures reported by *The Times* with regard to the British bicycle trade are not as large as one might have expected, considering the popularity of bicycling over there. In this connection may be mentioned some figures recently printed in France, estimating the number of bicycles sold in that country in 1892 at 70,000, of which 35,000 (or one-half) were imported. In 1893 the number sold was 90,000, of which 26,000 (or 31 per cent.) were imported. When one considers the *American Cyclist's* estimate of 457,500 bicycles for this year's output in the United States, the European statistics seem almost insignificant.

The National Cycle Show was opened on December 6, at Crystal Palace, under the auspices of the Cycle Manufacturers' Trade Protective Association. According to the London *Times*, the 250 exhibitors' stands held 1480 bicycles. A larger number were entered, but on account of the lack of room many of the exhibits were reduced in size before the opening. From the manufacturers' standpoint the National is the more important of the Annual Shows, but the Stanley has the larger and more fashionable attendance. From all the accounts received it would seem that the latter was as devoid of novelties as the former exhibition.

BUTCHERS in Egypt are required to stamp meats with the government seal, to show that the inspection law has been complied with, and a letter-writer from Cairo says that a rubber stamp about 2½ inches in diameter is used for this purpose. The ink used is of a bright purple.

RUBBERS

FOR WHITTLED OFF

TOES

MANUFACTURERS OF LEATHER SHOES
HAVE BEEN TAKING THE WOOD OFF
THE TOES

WE SAW THEM WHEN THEY DID IT

WE WATCH ALL THEIR MOVES,

AND HAVE RUBBERS

TO FIT THEIR CREATIONS

YOU HAVE POINTED TOED SHOES

HAVE YOU RUBBERS TO FIT THEM?

BOSTON RUBBER SHOE COMPANY,

MAKERS POINTED TOED AND OTHERWISE.

HEARD AND SEEN IN THE TRADE.

IF half that is heard in the trade may be believed, this has been a good season for the rubber-factories, which ought to mean a good season for the factory hands, also. But one rarely hears of a strike in a rubber-mill, whether business is good or bad. The rubber industry in America has a unique record in this respect, and it occurred to me to ask a manufacturer for an explanation. "Rubber-mill hands are pretty well paid, in the first place," was his reply. "They are better paid than in the cotton-mills or woolen-mills, or in almost any other factories in the states where the rubber business is carrried on. In Massachusetts, last year, though wages declined in every other important industry, there was an increase in the average earnings of rubber-workers as compared with former years. Then they are too intelligent, as a class, to make the unreasonable demands sometimes made by operatives in other mills. Rubber-workers have been pretty well treated, too, in being kept employed during dull seasons. Of course it is sometimes to a manufacturer's interest to keep his mill running, even at a temporary loss, to prevent the scattering of a force of skilled employés trained to work together to the best possible advantage. Such a force can be acquired only gradually, and a result is that once a worker in a rubber-factory, a man is likely to remain there always, if he is worthy. A good many employés at our place have been at work there for thirty years. While the manufacturer may run his mill at a loss for purely selfish reasons, it is none the less an advantage to the employés, and renders them more inclined to be content with their places. Then I might mention an unwritten law among rubber-manufacturers that has helped to give stability to the labor situation. The manufacturers don't try to lure away each other's hands, nor is one likely to employ a hand leaving another factory without consulting the former employer. Hands leaving one mill on a strike would not soon get work in any other mill, and this fact helps to discourage strikes."

* * *

"THE holiday trade cuts a very small figure in the rubber-goods business," said a dealer. "There are no distinctively holiday goods in rubber, except that perhaps toys sell better at Christmas than at other times, but toys make a small item in the general rubber store. I have noticed, however, a growing tendency on the part of buyers in the holiday season to select, for children and for grown people, presents of a practical or substantial kind. We sell, for instance, a good many mackintoshes that are meant for Christmas presents, and I think the idea a sensible one. But this does not increase the number of mackintoshes sold in a year; it only concentrates the sales a little more into this particular season."

* * *

ONE might expect to find the air-brake people ready to insist upon the enforcement of the law requiring all railway cars to be equipped, before 1898, with automatic brakes and couplers. There are yet about a million locomotives and cars to be equipped and, as THE INDIA RUBBER WORLD showed last month, the expense for rubber hose alone for the air-brake service would aggregate a large sum, with a continual expense for renewals. But the rubber needed for each car—a pair of 22-inch lengths of 1-inch hose, with gaskets for connections and rubber seats for valves—is a small item compared with the whole cost of the automatic-brake outfit, which runs as high as $100 for passenger cars and $250 for locomotives. There are single roads that would have to expend $1,500,000 to comply with the law. The question is, can they do it, with their present admitted scarcity of money? As Mr. George F. Evans, of the Westinghouse Automatic Brake Co., said to me: "If Congress can compel railways without money to buy air-brakes, it can compel us to sell the equipment without getting paid for it, and I don't think that the matter will be pushed that far." However, most cars now built are fitted to receive the new brakes, but no brakes will be bought for cars likely to go to the scrap pile before 1898. Three years hence, therefore, a large proportion of the railways will be equipped with automatic appliances. In the case of railways which, after doing their best, are then not fully supplied, Mr. Evans thinks that the government will make concessions, in which he agrees with the rubber-manufacturer quoted in THE INDIA RUBBER WORLD last month.

* * *

RAILWAY hose comes in for its share of the abuse everywhere heaped upon rubber goods. Because rubber can be roughly handled, some people forget that it needs any care at all. Mr. Evans says that while rubber hose used in train-brakes ought to stand two years of service, very much of it does not, simply for the lack of proper treatment. Then the rubber manufacturer is blamed for selling "rotten" goods. It is a matter of interest, by the way, that the train-brake equipment has progressed more rapidly in the west than in the east, probably on the same principle that has led many new towns to begin with certain public improvements not yet generally adopted in the oldest cities in the country.

* * *

"THE rubber-shoe industry has been the backbone of the crude-rubber trade during the period of depression that the country has gone through," said an important member of the importing interest. "The shoe companies don't seem to have been affected at all, and that is because they are making something for which there is a positive and growing demand. Then, too, the rubber shoe has reached a full measure of development, which enables the manufacturers to calculate safely in advance of their operations. It has been different with the bicycle-manufacturers, who are also large consumers of rubber. Until the present time the rubber tire has been in a state of evolution, and no man could be certain, when he started to produce a certain type of tire, that it would not be superseded by a new invention before his trade was organized. The fact that the rubber-shoe companies have pulled through the depression so successfully leads me to believe that there will be some new competitors in the field when business has improved a little more."

* * *

SEA ISLAND cotton is making its way in England as well as in the United States as a material for tire fabrics. It grows on certain small islands off the coast of the Carolinas, and also on a narrow strip of coast-lands, its distinctive quality being attributed to a peculiarity of the soil on which it grows. I asked a tire-manufacturer whether the demand for this fiber in his business was due to its actual merit or only to clever advertising. "There is no doubt but it makes the best fabric yet used in tires," was his reply. "If you will compare fibers of 'sea island' with any other cotton, you will find them longer, and that is an advantage in making a strong fabric. At the same time, the 'sea island' fibers are stronger than any other. Then, it has a softer fiber, the advantage of which appears in the woven fabric, where the threads crossing do not wear each other as much

as in the case of any other fabric known to us. A still further advantage exists in the uniform strength of the threads, there being almost no difference, whereas in a linen fabric some of the threads may stand a test three or four times greater than other threads next to them. In the case of a fabric cemented with the rubber in the tire, the effect of the sulphur is almost to ruin the linen, while 'sea island' cotton is affected to a less degree. But the best method, in my opinion, is to keep the fabric away from the vulcanizer altogether, cementing fabric and rubber together."

* * *

MR. EDWARD BACKUS, of the firm of Sears & Co., was a passenger on the *Origen* on her last run from Pará to New York. His visit to the great rubber port was a brief one, but it gave him an opportunity to note a great many improvements in the city since his residence there, as United States consul and as a business man. He says that the streets of Pará have been well paved, that they are kept clean, that garbage is burned, that a good system of sewerage exists, and that the death rate has been decreased until it is claimed to be no higher than in London. The commerce of Pará and Manáos has grown rapidly within a few years, owing not so much to the growth of the rubber output as to the introduction of other articles into commerce. Among other things, he notes a great increase in the imports at Pará of American goods, although the United States is almost without representation in the commerce of the Amazon. A good effect has followed the change by which most of the custom-house revenues are now enjoyed by the state, instead of going to the federal treasury. The state is therefore enabled to make greater expenditures for public improvements, and is taking advantage of the opportunity. An American firm are installing an electric-lighting plant at Pará, but the Germans secured the contract for an electric-street railway. The Paraense pay little attention to national politics, and quiet prevails there in spite of all rumors of war in the southern states. Recently a considerable addition has been made to the colony of Portuguese merchants in Pará.

* * *

I ASKED the president of a rubber-shoe company what he thought of the idea, sometimes expressed in print, that hard times help the sale of rubber footwear. "There's nothing in it," he said. "The idea is that people who are short of money, when their shoes begin to wear out, buy rubber overshoes to hide the holes and thus make the leather last longer. But rubber shoes are not suited for constant wear, and would become uncomfortable if put to any other than their proper use. This fact alone would prevent their use on the score of economy. Rubber goods have their particular place, and there will be a certain demand, whether times are good or bad. At one time it was urged that the leather boot, by becoming cheaper, was endangering the rubber-boot trade, and we made a decided cut in prices to meet the competition. But I never could trace any increase in our trade to this cut."

* * *

IT would be a good investment, in the opinion of Mr. Backus, to put a line of say three first-class steamers on the Amazon to run between Pará and Manáos, at a speed of twenty miles an hour, for the mail and passenger service, and freight for which quick transportation is wanted. Such a service would reduce by two-fifths the time now occupied between Pará and Manáos, and Mr. Backus is of the opinion that a liberal government subvention could be secured. The Amazon Steam Navigation Co., Limited, have become unable to handle all the freight offered to them, and complaints have been heard at their failure to build more steamers. Meanwhile several new, but smaller, transportation companies have been formed. The Amazon company are a strong organization, operating on English capital and under the British flag, and it has been suggested that their failure to increase their equipment has been due to the agitation for a law denying to outsiders a right to participate in the coastwise trade. Such a law has actually been enacted, but its enforcement has been suspended for two years. Its effect would be to hamper the Amazon company very materially.

* * *

"THE extent of a shoe-merchant's business may be judged by his sales of rubbers," said a jobber in this class of goods. "Taking the trade as a whole, the sale of rubbers amounts to about 5 per cent. of the total business done. In the southern states, of course, the percentage is smaller, while in the extreme north it is greater. There are no better locations for the sale of rubbers than on the down-town streets in New York which lead to the principal ferries. The beginning of a storm during business hours means a heavy demand for rubbers from the people starting home from their offices at the close of the day. In that part of the city 10 per cent. of the shoe trade consists of sales of rubbers."

* * *

A NOVEL use has been found for the miniature rubber boots sent out by several companies for advertising purposes. Street "fakirs" in New York sold numbers of them before the holidays for doll's rubbers. They proved attractive to the children and sold readily at 10 cents a pair.

* * *

A PNEUMATIC-TIRED cycle cab, such as was described in the "New Goods" pages of the last INDIA RUBBER WORLD, has been seen lately on the streets of Brooklyn, serving to attract attention to the business of an enterprising firm in that city.

THE MAN ABOUT TOWN.

RUBBER SHOE CASES NEED NO STRAPS.

SOME time since the Classification Committee of The Trunk Lines Association for the United States decided that unless boot and shoe cases were strapped that they should have to charge fifty per cent. more for their freight rates. Their idea in doing this was cover losses to the railroad companies on claims made by shippers for goods stolen in transit. In some cases these losses were large but in the majority they were small. The goods being shipped in pine cases it was an exceedingly easy thing for the thief to pry the cover off with a jack knife or chisel, abstract a pair of boots or shoes and put the cover back in position undetected. The new law was to have gone into effect January 1st, 1895. The matter, however, was taken in hand by the National Shoe & Leather Exchange of Boston and through their active work, the Association backed down and the order was rescinded. The matter of course affected largely the leather boot and shoe interests; it however, would have been a costly matter for many manufacturers and jobbers of rubber boots and shoes. The rubber boot and shoe men have not in the past been large sufferers from the sort of pilfering that has troubled the manufacturers of leather foot wear. The strapping of cases however, would cost them exactly as much proportionately as it would the leather men. One small jobber who was interviewed stated that his claims for losses for a year amounted to about $50, and that the bill for strapping the cases would be over $600. A large jobber who took very little interest in the subject at first, figured what the cost would be to him of strapping the cases and found that it would be between $3000 and $4000 a year.

OFFICIAL STATISTICS OF INDIA-RUBBER AND GUTTA-PERCHA.

For the United States Fiscal Year Ended June 30, 1894.

By courtesy of the Chief of Bureau of Statistics of the Treasury Department.

INDIA-RUBBER.

I.—Imports of Crude India-Rubber, by Countries.

From—	Pounds.	Value.
Europe:		
Belgium	108,593	$ 86,483
Denmark	908	215
England	3,641,993	1,410,317
France	218,063	71,512
Germany	1,189,078	421,690
Netherlands	23,124	9,901
Portugal	1,628,813	808,440
America:		
Brazil	23,386,132	11,058,808
Colombia	594,191	213,871
Costa Rica	25,707	7,454
Ecuador	782,593	247,299
Guatemala	89,826	35,649
Guiana—Dutch	13,164	5,305
Honduras	174,429	82,585
Honduras—British	23,064	9,132
Mexico	120,415	33,750
Nicaragua	892,908	316,883
Peru	1,607	1,136
Salvador	34,359	9,354
Venezuela	72,960	38,023
West Indies—British	21,613	5,965
Haiti	640	165
S. Domingo	192	40
Asia:		
East Indies—British	418,285	119,339
Dutch	3,278	1,556
Africa:		
Madagascar	265,411	95,794
Other Africa	26,437	17,327
Total	33,757,783	$15,077,993
Total, 1892-93	41,547,680	$17,809,239
Total, 1891-92	39,976,205	19,718,216
Total, 1890-91	34,712,089	17,856,280

II.—Imports of Crude India-Rubber, by Customs Districts.

At—	Pounds.	Value.
New York	31,741,905	$14,308,164
Boston	1,525,632	609,647
New Orleans	473,248	156,500
San Francisco	6,367	2,215
Philadelphia	4,755	2,162
Mobile	1,313	393
Galveston	600	196
New Haven	548	676
Paso del Norte	415	40
Total	33,757,783	$15,077,993

III.—Exports of Crude India-Rubber, by Countries.

To—	Pounds.	Value.
Canada	974,571	$468,166
England	710,911	355,645
France	92,259	45,527
Germany	457,641	219,918
Italy	34,081	20,589
Japan	1,932	1,233
Mexico	2,250	1,050
Netherlands	58,643	25,092
Russia	4,089	1,643
Scotland	8,159	3,144
Total	2,344,536	$1,142,007
Total, 1892-93	1,072,369	$617,194
Total, 1891-92	1,600,824	867,371
Total, 1890-91	1,041,300	592,251

IV.—Imports of Manufactures of India-Rubber, by Countries.

From—	Value.
Austria-Hungary	$ 327
Belgium	107
Denmark	5
England	108,604
France	85,169
Germany	105,430
Italy	5,360
Netherlands	1
Sweden and Norway	12
Dominion of Canada	551
Mexico	11
Brazil	3
Hongkong	32
British Australasia	36
Hawaii	3
Total	$309,308
Total, 1892-93	$338,435
Total, 1891-92	371,580
Total, 1890-91	354,645

V.—Imports of Manufactures of India-Rubber, by Customs Districts.

At—	Value.
Baltimore	$ 3,639
Boston	28,503
New York	230,653
Philadelphia	23,444
Providence	474
New Orleans	366
San Francisco	6,247
Willamette, Oregon	210
Chicago	12,023
Genesee, N. Y	388
Milwaukee	316
Cincinnati	121
Indianapolis	844
Louisville	439
Pittsburgh	369
St. Louis	190
Springfield, Mass	357
All other ports	720
Total	$309,308

VI.—Exports of Manufactures of India-Rubber (and Gutta-Percha), by Countries.

To—	Boots and Shoes.	Other Goods.
Europe:		
Austria-Hungary	$	$ 399
Belgium	7,254	26,501
Denmark	5,195	3,078
England	70,149	381,822
France	8,179	80,650
Germany	791	192,390
Italy		42,466
Netherlands	984	32,276
Portugal		65
Russia		7,265
Spain	190	1,576
Sweden and Norway		2,555
America:		
Nova Scotia, New Brunswick	16,717	15,403
Quebec and Ontario	5,677	191,909
British Columbia	12,075	5,429
Newfoundland and Labrador	4,227	2,410
Miquelon and Langley	785	209
Mexico	1,211	68,881
Costa Rica	87	2,937
Guatemala	183	5,814
Honduras	19	4,149
Nicaragua	100	1,945
Salvador		2,877
British Honduras		173
Bermuda	40	363
West Indies—British	332	5,848
Danish		872
Dutch	169	872
French	23	113
Spanish	2,558	54,778
Haiti	1,856	1,304
San Domingo		905
Argentina		1,752
Bolivia		389
Brazil	573	16,275
Chile	50	7,643
Colombia	736	9,383
Ecuador	478	2,461
Guiana—British		291
Dutch		113
Peru	752	3,222
Uruguay		97
Venezuela	654	8,126
Asia:		
China	498	4,685
Hongkong	162	1,335
Japan	791	11,908
Russia	57	400
Turkey		267
East Indies—British		544
Oceanica:		
British Australasia	9,523	28,765
French Oceanica	17	1,500
Hawaii	1,426	18,951
Phillipine Islands		125
Africa:		
British Colonies		11,619
All other countries	17	71
Total	$155,011	$1,306,831
Total, 1892-93	$252,391	$1,387,015
Total, 1891-92	185,570	1,232,497
Total, 1890-91	141,679	1,094,764

NOTE.—The exports of rubber boots and shoes embraced 261,657 pairs, as against 410,950 pairs during the preceding twelve months, and 231,105 pairs in 1891-92.

VII.—Exports of Manufactures of India-Rubber (and Gutta-Percha), by Customs Districts.

From—	Boots and Shoes.	Other Goods.
New York	$39,630	$786,086
Boston	86,889	122,361
Philadelphia		113,918
Vermont ports	2,654	105,414
San Francisco	11,435	53,804
Champlain, N. Y	2,187	49,479
Bangor, Me	3,623	7,279
Puget Sound	7,136	1,552
All other ports	3,458	66,938
Total	$155,011	$1,306,831

VIII.—Exports of Foreign Manufactures of India-Rubber and Gutta-Percha, by Countries.

To—	Value.
India-Rubber:	
England	$272
France	1
Germany	1,590
Canada	156,366
Mexico	443
Nicaragua	64
Gutta-Percha:	
Canada	119
Total	$158,845

GUTTA-PERCHA.

I.—Exports of Crude Gutta-Percha, by Countries.

To—	Pounds.	Value.
Germany	6,550	$1,571
England	1,374	349
Canada	685	403
Total	8,609	$2,323
Total, 1892-93	18,716	$4,243
Total, 1891-92	8,557	5,170
Total, 1890-91	51,950	15,110

II.—Imports of Crude Gutta-Percha, by Countries.

From—	Pounds.	Value.
England	13,890	$ 3,396
Germany	99,803	25,139
Netherlands	3,083	1,296
East Indies—British	292,599	18,969
Honduras	1,704	256
West Indies—British	8,082	2,579
Dutch	1,582	874
Ecuador	2 000	771
Guiana—British	1,125	495
Dutch	74,895	30,565
Total	498,763	$84,340
Total, 1892-93	582,278	$155,428
Total, 1891-92	308,239	114,874
Total, 1890-91	960,835	164,524

III.—Imports of Manufactures of Gutta-Percha, by Countries.

From—	Value.
Germany	$23,930
England	6,386
France	298
Austria-Hungary	36
Canada	3
Mexico	1
Total	$30,654
Total, 1892-93	$81,173
Total, 1891-92	61,276

NOTE.—These goods, to the value of $30,654 (of the importations for the year last closed), were entered at the port of New York.

WORN-OUT SHOES AS A SOURCE OF WEALTH.

A LARGE dealer in rubber scrap received on the last day of the year a telegram offering a lot at 5¼ cents, and his counter offer of 5⅛ cents was declined. These figures are a trifle lower than those ruling at the beginning of 1894, when a "boom" was in progress which reached its height in February, with a few sales at 5¾ cents. The disappearance of the snow brought to light increased supplies of scrap, so that by April 3¾ cents were quoted on carloads. It may be remarked, by the way, that prices vary little nowadays as between large and small lots. The middle of summer witnessed the beginning of a speculative movement which culminated in sales about the 1st of November at 5¾ cents. There is reason to believe that some large lots which sold at the highest prices reached had been acquired at a figure not higher than 4 cents. As will be seen from the quotations above the asking price has declined little since the unloading by the speculators, but this is not the season for prices to fall. During the snow months collections of scrap are limited and, should the grinders be busy, the quotations are apt to be firm. It is suggested in the trade that while the end of the year is likely to bring a weakening in figures through the necessity in some cases for sales at that season for the liquidation of pressing bills, there need be no surprise at an advance immediately afterward.

Old shoes continue to constitute the greater part of the rubber scrap in the market; one dealer estimates that at least seven-eighths of what he receives are shoes. The quality of the rubber is not the only point of importance, but the degree of vulcanization, as well. Thus some of the bicycle-tires are made of the best grades of rubber, but the different degree of vulcanization employed in their manufacture is such that entirely different treatment would be needed for making reclaimed rubber from tire scrap. The same thing is true, in a great measure, in the case of rubber "goloshes" made in Europe as compared with the American rubber shoe. These facts will help to explain why rubber shoes still constitute so large a proportion of the scrap collected for the trade. At the same time, while a great deal of rubber has gone into bicycle-tires, the majority of these tires are still in use, for the pneumatic tire, particularly, is quite a modern invention. Tires cost too much money to be hastily discarded.

Speaking of tires, brings up the question whether reclaimed rubber has been used by any of the manufacturers. The question was answered in one quarter as follows: "I honestly don't think that it is. I know manufacturers of mechanical rubber goods who make tires who buy reclaimed rubber, but I don't believe that it enters into their tires. Of course, I cannot say positively." On the other hand, an expert in rubber goods said: "Of course reclaimed rubber is used in bicycle-tires. There is an unmistakable odor about reclaimed rubber, and I have detected that odor in the tires of at least two extensive manufacturers." It is worth mentioning here that pure gum tires are an impossibility, just as pure gold is unfitted for coinage or for the jewelers' use. The problem with the tire-manufacturers has been the best compound to be adopted, and a problem not less interesting to some people outside the factory is whether reclaimed rubber has been introduced into any of the compounds.

As for the consumption of reclaimed rubber by American manufacturers, the larger share continues to be employed in the shoe industry, with mechanical goods a good second, and water-proofing third. There are no trustworthy statistics as to the extent of the industry. An estimate given to THE INDIA RUBBER WORLD man of the amount of rubber scrap consumed in a year is 15,000 tons, or 30,000,000 pounds. This, however, it is not possible to verify. The United States government reports the following imports of rubber scrap for twelve months ending June 30, 1894:

From—	Pounds.	Value.
England	188,997	$6,736
France	68,211	1,832
Germany	707,647	20,770
Sweden and Norway	10,675	284
Turkey	131,621	2,487
Canada	664,498	23,640
Cuba	2,359	54
Total	1,774,008	$55,803

The facts and figures above have related throughout to conditions in the United States. Lately there has been established a rubber-reclaiming mill in Canada, which country for some years past has been a good customer for the mills in the United States. Its establishment led last year to the exportation of $10,324 worth of rubber scrap from the United States, although, as has already been shown, Canada has been a shipper of considerable scrap to this country. There are at least two rubber-reclaiming mills in England, one of them being at Manchester, and in them, as in the American mills, old shoes form the most important item of stock consumed. At the same time Europe has been a liberal buyer of American reclaimed rubber.

AFFAIRS OF THE UNITED STATES RUBBER CO.

AT the last monthly meeting of the directors of the United States Rubber Co., on December 19, at the company's offices in New York, a semi-annual dividend of 4 per cent. was declared on the preferred stock, payable on and after January 15. The amount necessary for this payment is $776,020.

No official action has yet been taken looking to the declaration of a dividend on the common stock. The vice-president of the company, Mr. Robert D. Evans, said to an INDIA RUBBER WORLD reporter that while the company's earnings would have permitted the payment of a dividend on this stock from the beginning, it had been thought a wiser policy to accumulate a good surplus than to distribute all the company's profits among the stockholders as fast as earned. It was the opinion of Mr. Evans, however, that a small dividend might now safely be declared, and that the management of the company probably would, within a short time, take some action in the matter.

The quotations which follow represent the daily transactions in Rubber shares on the New York Stock Exchange for each business day during the past month:

LISTED ON THE NEW YORK STOCK EXCHANGE.
201,660 shares Common=$20,166,000.
194,005 shares Preferred=$19,400,500.

DATES.	COMMON.			PREFERRED.		
	Shares.	High.	Low.	Shares.	High.	Low.
December 1	....	.....	.....	.....	.....	.....
December 3	.....	.....	.....	.....	.....	.....
December 4	.....	.....	.....	.....	.....	.....
December 5	950	42	41½	.....	.....	.....
December 6	.....	.....	.....	20	97¼	97¼
December 7	500	42¾	42	.....	.....	.....
December 8	150	43	43	.....	.....	.....
December 10	1,305	43¼	42⅞	190	97	97
December 11	1,900	43¾	43	100	97¼	97¼
December 12	2,100	44	43	190	97½	97¼
December 13	690	44	43⅞	100	98	98
December 14	1,870	44¼	43¼	130	98	98
December 15	560	43	42¾	.....	.....	.....
December 17	820	42¾	41¾	317	98	97
December 18	25	43	43	11	98¾	98
December 19	100	42	42	20	98¾	98¾
December 20	1,915	44½	42	152	98	98
December 21	2,647	44¾	44	260	98½	98½
December 22	1,010	44⅞	44½	.....	.....	.....
December 24	1,630	45	44¾	10	99	99
December 26	3,020	45	44½	632	99	99
December 27	900	45	44⅞	12	99¼	99¼
December 28	1,279	45½	44⅞	.....	.....	.....
December 29	150	45	45	.....	.....	.....
December 31	1,200	45⅛	44⅞	.....	.....	.....
For the month	24,561	45½	41½	2,144	99¼	97
Month preceding	19,194	45	40¼	6,133	96¾	94¾
Year 1893	....	60⅝	17	.....	99½	50
Year 1894	.....	45⅛	33	.....	99¼	79¾

RUBBER CAPES NOT SUITED TO ARMY USE.

IN a recent official report the quartermaster-general of the United States army said: "The stock of rubber blankets and ponchos left over at the close of the war having become exhausted, the subject of procuring another supply of waterproof equipments has been given consideration. Samples of various kinds and qualities of articles adapted to the purpose were procured by special manufacture, and their merits considered and compared. A careful study of the whole subject has led to the conclusion that a rubber cape or talma will serve both the purpose of the blanket and poncho and afford as much protection as a rubber coat, without the latter's disadvantages of weight, warmth, etc. Arrangements have been made to procure 300 of these capes for distribution to the army for trial. They will be of two lengths (38 and 40 inches), will button down in front in a concealed flap, and have high collars, which, when raised, will fit closely to the neck, affording ample protection from storm. They will admit of free air circulation and are capable of easy adjustment."

TO THE EDITOR OF THE INDIA RUBBER WORLD: In answer to your letter regarding rubber capes, I would say that from reports thus far received, they have not met with favor. They are not as well adapted to the requirements of the service as the rubber ponchos or blankets heretofore supplied. No further experiments will be made, and rubber ponchos will be issued hereafter. The annual issue of rubber ponchos or blankets has hitherto been from three to four thousand. Very truly yours,

R. N. BATCHELDER,
Quartermaster-General, U. S. A.

War Department, Washington, D. C., November 30, 1894.

THAT was a notable supply of rubber goods which the war department had in stock when the war closed, thirty years ago. During the last year of the war—that is to say after July 1, 1864,—the United States government bought and paid for 625,624 rubber blankets and 710,979 rubber ponchos, at a total cost of $6,296,876.33. Most of this equipment was still in stock when the war came to an end, in April, 1865, and although the goods have been liberally supplied to the army since, it has been necessary during thirty years to buy very few rubber blankets or ponchos. The old supply now having become exhausted, however, the government is beginning to contract for new rubber goods of this class in quantities to meet actual demands. By the way, the war times must have given somebody in the rubber business a "boom," judging both from the heavy orders for the army and from the prices paid. The range was from $2 to $5 for rubber blankets and from $1.87 to $5.60 for ponchos.

THE NEW STORE OF THE STOUGHTON.

ABOUT the middle of January the Stoughton Rubber Co. (Boston) will move from 44 to 24 Sumner St., corner of Hawley. They will take the place known as "The Moulton" and turn it into what they believe will be the finest rubber store in the United States. The store has a depth of 135 feet and width of 27 feet, and is already elegantly fitted, the owners of The Moulton having spent some $28,000 in decorations. The fittings that are to be put in by the Stoughton Co. will be in keeping with its present elegance, all of the woodwork being quartered oak. The store is remarkably well adapted for the sale of the Stoughton goods; it is light, has magnificent show windows and is close to the great wholesale and retail centers of Boston. The clothing will be displayed in the front of the store, and in the rear will be tires, mechanical goods, etc. In the rear also will be the offices of the company, very handsomely fitted, together with an ample sample room for the wholesale trade. The store itself will be lighted by more than two hundred electric lights.

THE Penn Rubber Co., of Philadelphia, has been incorporated for the manufacture and sale of rubber goods, oil-cloths, and carriage materials. The capital named is $50,000. The directors are William L. Blodgett, Trenton, N. J., and Edwin H. Chapman and S. Spencer Chapman, Philadelphia. Other incorporators named are Francis Chapman and William Alexander Brown.

NEW HOME OF A RUBBER COMPANY.

THE Goodyear Rubber Co. are fairly installed in their new store, Nos. 787-789 Broadway, New York. During the week preceding the holidays Manager James Kipp went up from the Broome street store with a force of clerks and began the arrangement of stock in the new quarters, even before the carpenters had finished their work, and the sale of goods began at the same time. By the end of this month the removal will have been completed, and the store at Broome street will be given up. The liberal dimensions at the new location have been noted already in THE INDIA RUBBER WORLD. They will make possible a better display of goods than in the old store, both on the floor and in the windows; there will be better accommodation for customers; the jobbing trade can now be separated into a distinct department; and more room exists for the officers and salesmen and other employés of the company. The store extends along Tenth street for 168 feet, with a liberal provision of windows, while skylights have been placed over the L of 53 × 38 feet which extends from the rear of the store. An electric installation completes the lighting arrangements. Near the front of the store a space has been partitioned off as a ladies' reception room, and Manager Kipp's desk will also be well forward. President Shepard, Secretary Minott, and the force of bookkeepers will occupy a suite of offices toward the rear, on the Tenth street side of the building. The interior finishing throughout, including the shelving cases, is of an extra quality of oak. The stock consists of mackintoshes, boots and shoes, mechanical rubber goods, and various lines of sundries, the idea being to offer under one roof everything made of rubber. For storage purposes there is a basement extending beneath the entire salesroom.

TWO RUBBER STORES OF ONE FIRM.

A NEW rubber store was opened last month at Indianapolis, Ind., by the Central Rubber and Supply Co., who have been incorporated under the laws of the state with $25,000 capital. The store, at No. 79 South Illinois street, is described in the local newspapers as a very handsome one, and fully stocked with rubber clothing, shoes, mechanical goods, and sundries. The president of the new company is E. C. Deardorff, and the Secretary-Treasurer, T. H. Deardorff. These names will at once suggest to INDIA RUBBER WORLD readers the Toledo Rubber Co., established four years ago and successfully managed by the gentlemen named above. Mr. T. H. Deardorff writes from Indianapolis that the Toledo store will be continued as heretofore. The Indianapolis house advertises the state agency of the New York Belting and Packing Co., Limited.

DEATHS IN THE RUBBER TRADE.

CHARLES T. WARNER, who died suddenly at his home in New Brunswick, N. J., on November 30, was superintendent of the New Brunswick Rubber Co.'s works for several years and of the Novelty Rubber Works for seventeen years. He retired from business in 1878, and served as city collector from 1881 to 1893. He was sixty-one years old.

Samuel G. Howe, owner of the rubber-cement works on Talman street, Norwich, Conn., died at his home in that city on November 29, at the age of seventy-six. He is survived by his wife, two daughters and a son—W. R. Howe, who has been associated in business with his father for fifteen years.

Emil Herold, for many years director of the German Rubber and Gutta-percha Goods Factory (formerly Volpi & Schlüter), died on November 14, aged sixty-two years, after a short illness. The deceased was held in high esteem by all who knew him, both for his business ability and his excellent character.

S. K. Woodworth, head bookkeeper and cashier of the Goodyear Rubber Co.'s branch store in Kansas City, Mo., for five years past, dropped dead in his room on December 14. He was thirty-eight years old and a bachelor.

INDIA-RUBBER CUSTOMS CASES.

JANUARY 18 is the date assigned on the docket of the general appraisers of the United States treasury department for the next hearing of cases involving imports of India-rubber goods. The headquarters of the appraisers are at No. 125 Bleecker street, New York.

A recent opinion written by Appraiser Thaddeus S. Sharretts reverses the decision of the collector of customs at New York with respect to the duties chargeable on two cases of bicycle-tires imported from the Puncture-Proof Pneumatic Tire Co., Limited, of Dublin. They were classed as "manufactures of cotton and India-rubber," which are dutiable at a higher rate than goods in which India-rubber is the ingredient of chief value. These tires consist of cotton cloth in the form of tubing, heavily coated with India-rubber, and stuffed with raw cotton. The appraisers sustained the protest of the importer, on the ground that an analysis of a sample showed the India-rubber to largely exceed in value that of the cotton entering into its fabrication.

TRADE PUBLICATIONS.

IN their new catalogue (No. 6) of lawn-sprinklers and hose specialties the Pleuger & Henger Manufacturing Co. (St. Louis) introduce two new sprinklers, each with distinctive features, besides calling particular attention to two leading styles which have been tested in their trade for five years past. A wide variety of goods will be found described attractively in this seasonable catalogue.

—A wide range of rubber goods is embraced in the list of the Metropolitan Rubber Co. (Cleve & Krim), of No. 49 Summer street, Boston. "If it's rubber, we've got it," is the promise printed on the cover, and from the number of items inside, with prices, their claim would seem to be well founded.

—A 24-page pamphlet devoted to mackintoshes comes to us from a Boston manufacturer. The striking features about it are the illustrations which are half-tones, some fifteen in number, and are truly full of life and beauty. The delineator signs himself by the modest initial F. The catalogue is published by the Columbia Rubber Co., Boston, Mass.

—A handsome 50 page pamphlet devoted to mechanical goods has just been received. It describes and lists beltings of various kinds, cotton and rubber hose, for garden, mill and fire purposes, packings of all kinds, mats, treads, and general molded goods. The catalogue is adorned with original cuts of the goods described, and from an artistic and typographical standpoint is very finely gotten up. Published by the Empire Rubber Mfg. Co., Trenton, N. J.

—"Styles of Toes" is the heading of a bright folder sent out by the American Rubber Co. (Boston). The publication is neat and is every way practical. It shows by illustration and by the simplest and most excellent arrangement in the way of lists of goods manufactured, exactly what toes go with these goods, and best of all the whole thing can be seen at a glance.

TRADE AND PERSONAL NOTES.

THE annual statistical sheet of the Gould Commercial Co. will be issued about the time this paper appears. It will be referred to in our February number.

—The Columbia Rubber Co. (East Braintree, Mass.) are said to have had an exceptionally good year. The factory has been wired for electric lights, in order to provide for night-work.

—The L. Candee & Co. (New Haven, Conn.) have favored THE INDIA RUBBER WORLD office with a handsome albertype picture of their extensive factory, appropriately framed. They advise us that one of these pictures, unframed, will be sent to any retailer of rubber shoes who may write for it.

—The Goodyear Rubber Co. are sinking an artesian well at their factory at Middletown, Conn., and have already met with success in the search for water. The company use ordinarily 35,000 gallons of water daily.

—The Marvel Rubber Works, at Woonsocket, R. I., closed on December 22, on account of serious breakages in the machinery, it being the first stop within a year.

—Mr. Clarence H. Williams has accepted a position as traveling salesman for Henry F. Knowles of Boston, selling the "Globe" goods in New England.

—The Ehlers-Walsh Rubber Co. is the name of a new concern lately formed in St. Louis, Mo. The company are to wholesale general rubber goods. Mr. W. Ehlers is the president, and Mr. Walter D. Walsh is vice-president and secretary. Mr. Walsh by the way is a well-known rubber clothing salesman and has a fine trade in the southwest.

—Mr. Walter A. Clapp, for some years past with the Hodgman Rubber Co., of Boston, severed his connection with them the first of the year, to accept a similar one with the Boston Rubber Co. In addition to the full line of mackintoshes and other goods manufactured and the Bell Brand trade mark, he will carry the Rigby and Cravenette garments of the Beaver Mfg. Co. of Boston.

—Mr. William Yerdon, of hose band fame, sends THE INDIA RUBBER WORLD a bright New Year's greeting which we here acknowledge with thanks and good wishes.

—Mr. Frank N. Place, formerly with the Metropolitan Rubber Co., has accepted a position with the Pacific Rubber Co., of New York.

—Mr. Hanseli, well known as the manager of the Birnbaum Rubber Co., New York, has gone to Europe for a brief stay.

—Mr. Jas. W. Godfrey, one of the best known and most successful of the insulated wire men, has severed his connection with the N. Y. Insulated Wire Co. and accepted the selling agency of the Habirshaw Insulated Wire Co., of New York.

—Ed. H. Foss & Co., of Dover, N. H., are reported as having contracted to sell 7000 cases of Colchester goods by May 1, and to do this several traveling salesmen have been employed by Mr. Foss. The Colchester Rubber Co. are represented in Ohio by a force of salesmen consisting of C. Gililan (Portsmouth), A. D. Adams (Springfield), J. E. Courtright (Columbus), J. W. Van Valkenburg (Mansfield), and Edward Preston (Mansfield). A meeting of these gentlemen with President Watkinson was reported lately in the Mansfield newspapers.

—The carriage-makers who are licensees in America under the rubber-tire patents controlled by the Earl of Shrewsbury are Brewster & Co., New York; William D. Rogers, Son & Co., Philadelphia; Chauncey Thomas & Co., Boston; and C. P. Kimball & Co., Chicago.

—The Newton Rubber Works (Newton Upper Falls, Mass.) closed during Christmas week to give their employés a vacation.

—The Meyer Rubber Co. have joined in an action brought by a national bank at Detroit, Mich., against the shoe firm of Snedicor & Hathaway, in that city, asking for an accounting and the appointment of a receiver. It is averred that the firm are indebted to the bank for $75,000 and to the Meyer Rubber Co. for $28,000, secured by trust deed and chattel mortgages. The firm deny that they are insolvent, and claim assets of $165,000, against liabilities of only $103,000.

—The factory of the National India Rubber Co. remained closed for a week during the holidays, with the exception of the clothing department, which was idle only two days, and the shipping department, which is never closed.

—Johnson, Moody & Co., Boston auctioneers, on December 27 conducted a big sale of rubber boots and shoes—"seconds," imperfect goods, and goods somewhat out of style. Over 5000 cases were offered, from the factories of the Meyer, American, Wales-Goodyear, Woonsocket, and Candee companies. The prices obtained are stated to have been only 15 to 20 per cent. below the regular value of new goods in the same lines.

—Among the items of crude rubber on the steamer *Origen*, which arrived on December 13, was a consignment direct from Iquitos, to G. Amsinck & Co.

—The Hodgman Rubber Co. have added to their plant at Tuckahoe, N. Y., a water-tower fifty-five feet high, with a capacity of 5000 gallons, as a further precaution against fires.

—The National India Rubber Co.'s latest building is to be used as a compounding-room. It is of brick, one story high, and 60 × 100 feet.

—S. H. Stratton has resigned as manager of the rubber department of the Tennent-Stribling Shoe Co., who represent the Woonsocket Rubber Co. in St. Louis. Vice-President W. C. Stribling will resume control of the department.

—The Goodyear's India Rubber Glove Manufacturing Co., as usual, closed their factory at Naugatuck, Conn., during Christmas week for stock-taking, boiler inspection, and repairs. Since 1884 there has been no other shut-down at these mills than the annual week for inventorying in the holiday season.

—The L. Candee & Co. (New Haven, Conn.) resumed work on December 3, after a shut-down of a week, including Thanksgiving day.

—The fire in the extensive bicycle-factory of H. A. Lozier & Co., Cleveland, Ohio, is not likely to diminish the demand for pneumatic tires. A large part of their plant was saved, and much material, and work was resumed in part immediately after the fire. Colonel Albert A. Pope sent a telegram tendering the use of the Hickory Wheel Works, but the Lozier company will not need to leave Cleveland for a place to work in.

—Mr. Louis K. McClymonds, manager of the Mechanical Rubber Co. (New York), is reported to have given $5000 to the First Methodist Episcopal church of Massillon, Ohio, for the purchase of an organ. Mr. McClymonds is a native of Massillon.

—A very handsome rubber plant, one that needs no care, and is further useful by bearing upon its broad leaves the days and months of the year, comes from the National India Rubber Co., Providence, R. I. As a calendar that will appeal kindly to all rubber men this is one of the most appropriate yet received.

—A new company in the manufacture and jobbing of mackintoshes and rubber clothing is the Sterling Rubber Co., of New York, with offices at 111 Duane street. The firm is composed of John H. Tissot, Jr., Chas. H. Bishop and John L. Schultz. Mr. Bishop, who was formerly with the American Rubber Co. and is the general manager, is a well-known salesman in this line and has a fine trade throughout the East.

—The Brown Shoe Company, of St. Louis, close up 1894 with the largest business of any year in their history. At the December meeting of their stockholders they voted to increase their capital stock from three hundred to four hundred thousand dollars, all paid in. This enables them to easily handle their rapidly increasing business, and to give better and greater advantages to their customers. They are the sales agents for the Candee, Goodyear Glove, Jersey and Imperial brands of rubber footwear.

—Most of the rubber-tired hansom cabs on the New York streets are imported. The renewing of tires and the fitting of cabs of domestic make has been done mainly by A. J. Walker and J. B. Brewster & Co. (a different firm from Brewster & Co.), working under license from a foreign patentee.

—A fine picture of the great factories of the American Rubber Co., Cambridgeport, Mass., framed in oak, is received by THE INDIA RUBBER WORLD and is hereby acknowledged with thanks.

—The tire department of the Boston Woven Hose and Rubber Co. has been placed in charge of C. E. Weaver, who made a successful manager for the bicycle department of the McIntosh-Huntington Co. (Cleveland)

—The industrial situation is good at Cambridge, Mass. The Boston Woven Hose and Rubber Co. are doing more work than at this time last year, and the American Rubber Co. report business better with them than it was a year ago.

—Mr. Charles L. Ireson, the well-known leather belting manufacturer of Boston, has taken the New England agency for the Manhattan Rubber Mfg. Co., of New York. He will carry a full line of their mechanical goods at his store at 97 High street. Mr. Frank E. Hall (formerly of the Hall Rubber Co.) will be the manager of sales.

—Mr. James F. Brook, formerly of Brook, Oliphant & Co. (Trenton, N. J.), who has been absent from the city since March, 1891, and his whereabouts generally unknown, suddenly returned about the middle of last month. His lengthy retirement was due to business embarrassments which are said to have been removed. According to popular report most of his time was spent in Texas in civil engineering. It is now rumored that he intends soon to start a new rubber company in Trenton.

—Mr. Alfred C. Bliss, who has had especial success as a salesman for mechanical rubber goods in New York state, connected himself with the Manhattan Rubber Mfg. Co. the first of the year.

—The Candee Calendar for '95 is a beauty. A dainty little miss nestled in furs, holding a doll, seated in a rubber shoe, is the fetching part of it, which one should see to appreciate. Issued by the Candee Rubber Co., New Haven, Conn.

—Some years ago when Mr. James Hardman, proprietor of the Riverside Rubber Works, was just starting in the rubber business he found that he would need a calender. With no other guide than a picture of the machine in THE INDIA RUBBER WORLD he made his patterns and built one for himself, that is all of it except the rolls. The calender is still running at his factory and turns off the finest kind of work.

—The J. F. W. Dorman Co., rubber-stamp manufacturers in Baltimore, Md., have removed their salesroom and offices to the Equitable building.

—The Peters Rubber & Supply Co. have taken the St. Louis agency for the Manhattan Rubber Mfg. Co., of New York.

—The combination Roll & Rubber Co. of Bloomfield, N. J., will put two tires upon the market this season, a cemented and clincher tire. This company have always had a reputation for good goods and undoubtedly will make a first-class tire.

—Various papers have been adapting an article that appeared in THE INDIA RUBBER WORLD some time since, regarding a new process for the recovery of rubber. In this adaptation, however, they have made one unfortunate error. Instead of stating that the liquid used in the recovery was a saline *solution* they have quoted it as saline water, thereby rendering their statement absurd.

—The Federal Rubber & Supply Co. is the name of a new concern having an office at 64 Federal street, Boston. It is managed by John M. Gardner, formerly of the Rhode Island Coupling & Rubber Co., of Providence. The lines represented will be mechanical rubber goods, cotton and linen fire and mill hose and high grade steam packing.

—Mr. Wm. Keyes, of the firm of Prescott Bros. (Boston), was married on December 27th to Miss Bertha Hanson Langley, daughter of Stephen S. Langley, Esq., of Winchester, Mass. Mr. Keyes and his bride take as a wedding journey, a trip to Florida.

—The Wellman Sole Cutting Machine Co. have given up their office in Boston and have moved to a new plant which they have had erected in Medford, Mass, The main building is of brick and is fitted with the latest and best tools and machinery for producing their sole cutting machines. It is lighted by electric lights from their own dynamo and is fitted with a fire-proof vault for the storage of sole patterns and other perishable property used in their work. One special advantage of this new plant is that they are able to fill orders now in a day which before would take them several days to turn out. The treasurer, Mr. Henry F. Mandell, has his office at the factory. Mr. A. M. Stickney, president, is at present in Europe, where he is putting in sole cutters in numbers of rubber factories.

—The Boston Rubber Co. are giving to special customers a magnificent glass sign, brass bound, and painted by hand in gilt letters with a few well-chosen words describing the Bell Brand goods. The middle of the sign bears a fine reproduction of the trade mark of the company.

—A statement found in a Rockport paper to the effect that the oil clothing business of the American Rubber Co. had been transferred to other parties is evidently an error. THE INDIA RUBBER WORLD is in receipt of a letter from Mr. S. Lewis Gillett which says: "We are still supplying our many customers with the Pilot and Lone Fisherman brands of oil clothing of our own manufacture and expect to continue to do so until some one gets up a line at least equal to ours. Kindly correct the mistake."

—The firm name Ette & Henger Mfg. Co., the well-known St. Louis house who manufacture lawn sprinklers, has been changed to the Pleuger & Henger Mfg. Co.

—An expert claims that before a great while the United States will export many rubber shoes to France, as our styles fit that market wonderfully well.

—Mr. R. H. Thompson, who for some time past has been New England salesman for the Clifton Rubber Co. of Boston, has taken charge of the Chicago agency, with an office at 183 Dearborn street. Mr. Thompson is a well-known and popular salesman, and no doubt will find many friends in his new field.

—The Bloomingdale Soft Rubber Works, located at Bloomingdale, N. J., are running twenty hours a day, so great is the pressure of orders.

—The steamer *Prins Willem III*, which arrived in New York on December 9, from Surinam, carried about 25,000 pounds of Balata.

—The Excelsior Rubber Works (New York) claim an increase in sales of stamp rubber for 1894 of 160 per cent. as compared with 1893.

—Mr. Frank West, one of the office force of the Boston Rubber Shoe Co., was recently united in marriage to Miss Savory. The marriage was a very quiet one, or would have been, had not the couple happened to call at the pastor's house to be united just as the church choir met for rehearsal. The result was that when they drove away from the house their carriage was adorned by a large sign reading "just married."

—The American Rubber Co. are reported to be manufacturing 20,000 pairs of rubber boots and shoes per day, and 7500 mackintoshes per week. The weekly pay-roll is reported at over $15,000.

—Coupons due on January 1 on the 6-per-cent. mortgage debenture bonds of the New York Belting and Packing Co., Limited, it was announced, would be paid on and after that date upon presentation at the offices of the Knickerbocker Trust Co., in New York, The same announcement was made respecting coupons due on January 1 on the first-mortgage gold bonds of the Mechanical Rubber Co.

—Mr. C. F. Parker, of aluminum boot tree fame, has removed his office from 105 Summer street to 41 Lincoln street.

REVIEW OF THE RUBBER MARKET.

THE end of December was marked by the highest prices of the year for crude India-rubber. During 1894 prices of fine Pará were exceptionally stable, the greatest range being confined within 9 points, whereas for ten years previous the average variation was about 21 points. The highest figure reached was lower than in any year since 1885, when quotations in New York fluctuated between 54 and 65 cents. On the whole, manufacturers have had reason to be satisfied with prices, since it is a common expression that fine Pará is "cheap" so long as it does not go above 70 cents. The lowest figures of the year, however, failed to stimulate buying on the part of consumers, since rubber-manufacturers are like most speculators in hesitating to buy on a falling market. There has been an almost complete absence of speculative movement, unless some changes in holdings toward the end of the year have been for this purpose. The truth is that manufacturers have been gradually buying more and more rubber direct, until some of the largest cargoes now reaching New York contain a very small percentage of rubber for the market. With cable communication and frequent steamers, consumers are able to buy in Pará with close reference to their needs, and the houses in the trade there prefer selling at their docks to consignment to a distant market. A point not to be ignored is that both parties to such transactions save something in commissions and other expenses. A notable fact is that the stocks of Pará rubber in New York at the close of the year were practically in the hands of only three firms. In answer to the suggestion that this fact may have helped to influence the recent firmness in quotations, it has been remarked, on the other hand, that the competition between the houses alluded to is as active as could exist with double the number in the market.

The beginning of the year just closed saw the period of depression still affecting trade and industry, with the effect of lessening the consumption of rubber goods. It was a matter of surprise to some that the reduced demand did not render prices of crude gums less firm, since it was understood that the production of rubber was up to the standard. Holders of rubber were generally hopeful of improvement in conditions in the United States, however, while another element of importance has gradually been developing with respect to influencing the market: a growth in European consumption. Whatever may be the cause, rubber-factories in Great Britain and on the continent have been doing an increasing business within the past year or two, with the result that the proportion of consignments from Pará to the United States is less for 1894 than for several preceding years. This has had its weight in keeping up prices in the face of a weak demand for rubber in this country. Another cause has been the recent unfavorable reports of the present crop season in the Amazon valley, due to low water and sickness in some of the camps, which have combined to reduce the deliveries at Pará.

The production of Centrals is slowly but steadily declining. These rubbers for the most part come direct to the United States, in payment for our exports to the countries producing them, and the receipts meet with immediate sales at steady prices. The output of African rubbers on the whole does not increase, gains in some colonies being offset by a decrease in others. As soon as the production of a new district finds favor in the market it is apt to increase rapidly for awhile, to be followed by deterioration due to dishonesty, until a decline in price checks the shipments. Lately there have been some receipts of Kassai rubber, from the heart of the Kongo country, which sells at 2¼ pence in England, and comes nearer to being a competitor with Pará rubber than any other grade in the market. More than half the falling-off in the rubber importation of the United States last year, compared with 1893, was in Africans.

It is conceded that the production of rubber footwear during the year just closed was the largest on record, and though all the factories are still in operation on a good scale it cannot be discovered that there has been any excessive production. The new year promises to show the heaviest output of bicycle-tires yet reached, though manufacturers seem to show a conservative spirit with respect to keeping within the limits of demand. In other lines of rubber-manufacture conditions are hopeful, reflecting the general improvement of business which has followed the retirement of the tariff question as a disturbing element a few months ago. Inquiry in the trade fails to reveal any caution on the part of buyers due to the discussion of the currency question at Washington, which doubtless is due to the fact that no action by Congress is anticipated, to change the current of affairs. With these facts in mind, together with the reported shortage of the Brazilian rubber crop—which is confirmed in part by smaller Pará exports for 1894 than for three years preceding—there appears no prospect that crude rubber will decline in price in the near future.

The latest quotations in the New York market are:

Pará, fine, new t a	73½@75½	Sierra Leone	25@42
Pará, fine, old	76½@78½	Benguela	51@51½
Pará, coarse, new t a	52 @58	Kongo Ball	38@40
Pará, coarse, old		Cameroon Ball	36@37
Caucho (Peruvian) strip	51 @52	Flake, Ord. and Lump	24@25
Caucho (Peruvian) ball	54 @55	Accra Flake	15@18
Mangabeira, sheet	36 @40	Liberian Flake	25@26
Esmeralda, sausage	54 @54½	Primest Pinky Madr	60@62
Guayaquil, strip	37 @44	Madagascar, black	4°@44
Nicaragua, scrap	53 @54	Borneo	26@45
Nicaragua, sheet	51 @52	Gutta-percha, fine grade	1.30
Thimbles	37 @38	Gutta-percha, medium	1.00
Tongues	35 @37	Gutta-percha, hard white	85

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons:

	Fine and medium.	Coarse.	Total.
Stock, November 30, 1894	914	27	941
Arrivals, December	715	333	1048
Aggregating	1629	360	1989
Deliveries, December	676	232	908
Stock, December 31	953	128	1081

Stock in England, December 31	610 tons.
Deliveries in England, December	575 "
Pará receipts, December	2090 "
Stock in Pará, December 31	480 "
World's supply, December 31 (excluding caucho)	3677 "

PRICES FOR DECEMBER (ISLAND RUBBER).

	1894.		1893.		1892.	
	Fine.	Coarse.	Fine.	Coarse.	Fine.	Coarse.
First	69	48	68	48	66½	46½
Highest	73	51	68	48	67	47½
Lowest	69	48	67	47	65½	46
Last	73	51	67	47	67	47½

The figures given below may be regarded as fairly representing the asking prices for rubber scrap in the New York market for car-load lots:

Shoes, circular packing	5.20@5.25 cents.
White scrap	3 67@4. cents.
Car-springs	3. @3.75 cents.

There is no indication of a decline in price, as this is the season when the snow interferes with the collection of scrap, and receipts naturally will be limited until spring.

Respecting the financial situation Messrs. Simpson & Beers, brokers in crude India-rubber and commercial paper (New York), advise us as follows:

"There was a very limited supply of rubber paper during December, and it was quickly sold, at from say 3½@6 per cent., according to the grade of paper and the strength of endorsers. We quote first-class receivables at 3½@4½ per cent. and prime single-name at 5@5½ per cent., with from three to six months' to run. As the tendency of general business is to improve, a slight advance in rates is probable in the near future, especially as our bank reserves are some 50 per cent. less than a few months ago."

AFRICAN RUBBER IN ENGLAND.

IN the market report from London it is interesting to note that under date of December 14 appeared the following paragraph: "Owing to the intense fog prevailing to-day, no auctions were held, sales being postponed until Monday next." We note the following sales: about 100 tons Benguelas at 1/2 @ 2/–; 15 tons Peruvian at 1/10 @ 1/10 3–4; 15 tons Old Calabar at 1/1 1–2, and 40 tons of Prime Accra Buttons at 1/10 3–4 @1/11. The latest quotations are as follows:

Addah Niggers	1/9
Benguela Niggers	2/-
Buttons, prime	1/11
Buttons, No. 2	1/7
Borneo, No. 1	1/9
Cameroon Ball	1/4¾
Kongo Ball, No. 1	1/10
Kongo Ball, No. 2	1/7
Gaboon Ball	1/6
Kassai	2/6¼
Liberian	12 ½
Black Madagascar	1/8⅞
Pinky Madagascar	2/4⅜
Madagascar Niggers	1/6½
Niger Niggers	1/4½
Old Calabar (unselected)	1/1½
Rangoon	1/7½
Small Ball	11 ¾
Sierra Leone Niggers	1/5½
Thimbles	1/5½
Accra Paste	7d.
Accra Flake	8d.
Gaboon Flake	11d.
Lump Flake	11½

In addition to the sales noted above, about 200 tons of fine Pará were sold at prices ranging from 2/11 ¾ to 3/1 ½.

IMPORTS FROM PARA.

THE imports in detail of India-rubber direct from Pará at the port of New York, since our last report, have been as follows, expressed in pounds:

December 12.—By the steamer *Hilary*, from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	207,500	36,100	64,100	21,400	329,100
Boston Rubber Shoe Co.	20,400	300	8,900	.....	29,600
Joseph Banigan	.....	.....	21,000	.....	21,000
Lawrence Johnson & Co.	11,400	1,100	4,200	.....	16,700
Otto G. Mayer & Co.	13,100	3,600	.....	.....	16,700
Reimers & Meyer	6,300	4,000	900	.....	11,200
Total	258,700	45,100	99,100	21,400	424,300

December 13.—By the steamer *Origen*, from Manáos and Pará:

Reimers & Meyer	259,800	31,900	103,200	1,600	396,500
New York Commercial Co.	241,000	33,500	98,400	2,200	375,100
Boston Rubber Shoe Co.	128,100	28,900	22,800	300	180,100
Joseph Banigan	47,100	10,500	102,500	1,800	161,900
Charles Ahrenfeldt & Son	10,800	.....	1,300	20,400	32,500
Lawrence Johnson & Co.	.....	.....	22,800	.....	22,800
Sears & Co.	13,200	1,800	3,000	.....	18,000
G. Amsinck & Co.	1,100	.....	1,400	4,500	7,000
P. Lima	7,500	.....	1,500	.....	9,000
Total	708,600	106,600	356,900	30,800	1,202,900

December 30.—By the steamer *Maranhense*, from Pará:

New York Commercial Co.	216,800	26,800	160,400	2,200	406,200
Reimers & Meyer	87,500	20,000	46,000	600	154,100
Boston Rubber Shoe Co.	50,000	10,900	12,600	37,000	110,500
Joseph Banigan	28,500	8,900	51,600	.....	89,000
Lawrence Johnson & Co.	.....	.....	10,800	.....	10,800
P. Lima	1,300	.....	1,500	.....	2,800
Total	384,100	66,600	282,900	39,800	773,400

December Imports from Pará	2,400,600
November Imports	1,692,700
October Imports	1,566,200
September Imports	1,386,000
August Imports	964,500
July Imports	645,300
June Imports	1,591,300
May Imports	926,300
April Imports	2,566,868
March Imports	2,177,400
February Imports	2,309,402
January Imports	3,750,000
Total, direct from Pará, 1894	21,976,570

OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York, during December, 1894, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also, arrivals at New York of African and East Indian sorts:

CENTRALS.

DEC. 1.—By the *Welhaven*=Cape Gracias:	POUNDS.
Eggers & Heinlein (Nicaragua)	5,500
Eggers & Heinlein (Tuno gum)	12,000
Total	17,500

DEC. 2.—By the *Finance*=Aspinwall:	
A. Santos & Co.	24,488
G. Amsinck & Co.	16,317
New York Commercial Co.	9,500
Roldan & Van Sickel	8,975
J. M. Ceballos & Co.	7,697
C. R. Flint & Co.	6,969
W. R. Grace & Co.	6,500
Jacob Balz	3,400
D. A. De Lima & Co	2,314
Munoz & Espriella	2,000
Bock & Co.	1,836
Dumarest & Co.	252
Total	90,248

DEC. 3.—By the *Orizaba*=Mexico:	
Louis Monjo & Co. (Tuxpan strip)	600
Theodore Hermann	600
Total	1,200

DEC. 9.—By the *Leibnitz*=Bahia:	
Reimers & Meyer (Bahia)	3,000
George A. Alden & Co. (Pernambuco)	3,000
Total	6,000

DEC. 10.—By the *Yumuri*=Mexico:

H. Marquardt & Co.	1,400
Theodore Hermann	1,200
Graham, Hinkley & Co.	600
J. W. Wilson & Co.	200
J. Menendez & Co.	200
Total	3,600

DEC. 11.—By the *City of Para*=Aspinwall:

R. F. Cornwall (Nicaragua)	6,625
A. P. Strout (Nicaragua)	5,039
J. Aparicio (Guatemala)	1,632
Lanman & Kemp (Nicaragua)	402
C. R. Flint & Co	1,300
Andreas & Co. (Nicaragua)	4,424
Munoz & Espriella (Guatemala)	1,025
H. Marquardt & Co. (Mexican)	230
Roldan & Van Sickel (Colombian)	55
Total	20,677

DEC. 7.—By the *Newport*=New Orleans:

Earle Brothers (Nicaragua)	20,000

DEC. 12.—By the *Hilary*=Maranham:

W. H. Crossman & Bro. (Pernambuco)	1,500
G. Amsinck & Co. (Pernambuco)	6,100
Total	7,600

DEC. 10.—By the *El Rio*=New Orleans:

F. H. Robinson (Nicaragua)	9,625

DEC. 11.—By the *Adirondack*=Cartagena:

C. R. Flint & Co	1,650
A. M. Capen & Sons	1,500
Punderford & Co. (virgin slab)	900
Thiele & Quack (virgin slab)	450
Total	4,500

DEC. 14.—By the *New Orleans*=New Orleans:

W. H. Crossman & Bro. (Nicaragua)	5,700
F. H. Robinson (Nicaragua)	5,000
Earle Brothers	1,800
Total	12,500

DEC. 13.—By the *Alliance*=Aspinwall:

A. Santos & Co.	2,917
J. M. Ceballos & Co.	6,300
C. R. Flint & Co.	3,000
Hirzel, Feltman & Co.	1,100
New York Commercial Co.	9,800
Piza, Nephews & Co.	1,111
H. W. Peabody & Co.	114
Andreas & Co.	3,200
Bock & Co.	1,161
G. Amsinck & Co.	4,000
Munoz & Espriella	1,200
A. P. Strout	100
Total	34,103

DEC. 16.—By the *Hevelius*=Bahia:

Reimers & Meyer (Pernambuco)	12,000

DEC. 16.—By the *Habana*=Mexico:

P. Harmony's Nephew & Co.	1,000
H. A. Forrest & Co.	200
Total	1,200

DEC. 17.—By the *Washington*=Truxillo:

A. N. Rotholz (Nicaragua)	450
Ellinger Bros. (Nicaragua)	450
A. S. Lascelles (Nicaragua)	300
Total	1,200

DEC. 22.—By the *Advance*=Aspinwall:

A. Santos & Co.	6,118
C. R. Flint & Co.	2,500
Bock & Co.	1,180
Munoz & Espriella	2,735
T. G. Tomas	180
Dumarest & Co.	2,808
G. Amsinck & Co.	2,982
New York Commercial Co.	11,100
J. M. Ceballos & Co.	2,520
Hoadley & Co.	222
Hirzel, Feltman & Co.	617
Total	36,987

DEC. 24.—By the *Seguranca*=Mexico:

Graham, Hinkley & Co.	750
E. Steiger & Co.	300
H. Marquardt & Co.	150
G. Amsinck & Co.	150
Total	1,350

DEC. 23.—By the *Alene*=Cartagena:

D. A. De Lima & Co.	4,500
Munoz & Espriella	2,400
C. R. Flint & Co.	1,650
J. Ferro	750
To Order	1,350
Total	10,650

DEC. 25.—By the *Newport*=New Orleans:

Earle Brothers (Nicaragua)	18,000
F. H. Robinson (Nicaragua)	3,000
Total	21,000

DEC. 26.—By the *El Dorado*=New Orleans:

Earle Brothers (Nicaragua)	5,575

DEC. 29.—By the *Vittoria*=Vera Cruz:

H. Marquardt & Co.	450

DEC. 30.—By the *Carib*=Truxillo:

Eggers & Heinlein (Nicaragua)	4,000
José Agostini (Nicaragua)	1,000
H. W. Peabody & Co.	500
Total	5,500

DEC. 25.—By the *Berlin*=Southampton:

Otto G. Mayer & Co. (Mangabeira)	1,900
Total Centrals for December	356,315

AFRICANS.

DEC 1.—By the *Lydian Monarch*=London:

	POUNDS.
George Ropes—Madagascar	2,546

DEC. 1.—By the *Etruria*=Liverpool:

George A. Alden & Co.—Benguella	34,758
Loanda	9,411
Gutta Percha and Rubber Mfg. Co.—Accra	7,440
Total	51,609

DEC. 3.—By the *Persia*=Hamburg:

George A. Alden & Co.—Loanda	22,800
Madagascar	4,400
W. A. Brown & Co.—Niggers	11,900
Reimers & Meyer—Sierra Leone	7,900
Cameroon	800
Mozambique	1,945
Total	49,545

DEC. 8.—By the *Campania*=Liverpool:

W. A. Brown & Co.—Almeidina	6,318
African	4,682
O. G. Mayer & Co.—Accra	11,338
Reimers & Meyer—Liberian	5,760
Total	45,200

DEC. 11.—By the *Moravia*=Hamburg:

George A. Alden & Co.—Cameroon	7,90.

DEC. 12.—By the *Alecto*=London:

George Ropes—Madagascar	200

DEC. 13.—By the *Durham City*=Hamburg:

Reimers & Meyer—Mozambique	3,500

DEC. 16.—By the *Patria*=Hamburg:

George A. Alden & Co.—Cameroon	18,000
Reimers & Meyer—Cameroon	9,750
Total	27,750

DEC. 21.—By the *Britannic*=Liverpool:

George A. Alden & Co.—Cameroon	10,490
Reimers & Meyer—Thimbles	3,800
Total	14,290

DEC. 21.—By the *Lucania*=Liverpool:

Otto G. Mayer & Co.	9,000
George A. Alden & Co.	5,000
Total	14,000

DEC. 22.—By the *Normannia*=Hamburg:

Reimers & Meyer—Mozambique	5,307
George A. Alden & Co.—Madagascar	19,570
Total	24,877

DEC. 22.—By the *La Bretagne*=Havre:

Reimers & Meyer—Benguella	10,000
George Ropes—Madagascar	417
Total	10,417

DEC. 24.—By the *Massachusetts*=London:

George A. Alden & Co.	11,397
Reimers & Meyer—Mozambique	9,100
Madagascar	1,700
Total	22,197

DEC. 25.—By the *Berlin*=Southampton:

George A. Alden & Co.—Madagascar	21,900

DEC. 29.—By the *New York*=Southampton:

George A. Alden & Co.	5,900

DEC. 30.—By the *Etruria*=Liverpool:

Reimers & Meyer	3,200
Otto G. Mayer & Co.	5,400
Total	8,600

DEC. 30.—By the *Prussia*=Hamburg:

Lazard Freres—Madagascar	20,600
Reimers & Meyer—Tongues	19,600
Total	40,200
Total Africans for December	350,635

EAST INDIAN.

DEC. 3.—By the *Berlin*=Southampton:

	POUNDS.
George A. Alden & Co.—Pontianak	22,000

DEC. 3.—By the *Manitoba*=London:

Reimers & Meyer—Rangoon	4,694

DEC. 8.—By the *Campania*=Liverpool:

Reimers & Meyer—Penang	200

DEC. 12.—By the *Alecto*=Singapore:

George A. Alden & Co.—Borneo	11,213

DEC. 21.—By the *Glenesk*=Singapore:

George A. Alden & Co.—Pontianak	24,300
Reimers & Meyer—Pontianak	1,500
Total	25,800

DEC. 23.—By the *La Bretagne*=Havre:

Otto G. Mayer & Co.—Borneo	1,800

DEC. 24.—By the *Spain*=London:

Otto G. Mayer & Co.—Borneo	11,657

DEC. 24.—By the *Massachusetts*=London:

W. A. Brown & Co.—Pontianak	19,200
Reimers & Meyer—Assam	1,500
Total	20,700

DEC. 29.—By the *Richmond Hill*=London:

George A. Alden & Co.—Pontianak	27,400

DEC. 29.—By the *New York*=Southampton:

Reimers & Meyer	2,500

DEC. 30.—By the *Prussia*=Hamburg:

George A. Alden & Co.—Borneo	13,200
Total East Indian	137,164

BOSTON ARRIVALS.

DEC. 1.—By the *Venetian*=London:

	POUNDS.
George A. Alden & Co., Africans	6,400

DEC. 1.—By the *Virginian*=London:

George A. Alden & Co, East Indian	11,250

DEC. 1.—By the *Anglonian*=Liverpool:

George A. Alden & Co., Pará	3,900
George A. Alden & Co., Africans	7,450

DEC. 5.—By the *Parkmore*=London:

George A. Alden & Co., East Indian	7,700

DEC. 5.—By the *Sagamore*=Liverpool:

United States Rubber Co., Africans	36,000

DEC. 10.—By the *Rossshire*=Hamburg:

George A. Alden & Co., Africans	14,500

DEC. 13.—By the *Lancastrian*=Liverpool:

Boston Rubber Shoe Co., Pará	40,000
Reimers & Meyer, Africans	6,400

DEC. 15.—By the *Cephalonia*=Liverpool:

Boston Rubber Shoe Co., Africans	30,000
Reimers & Meyer, Africans	14,000

DEC. 25.—By the *Catalonia*=Liverpool:

George A. Alden & Co., Africans	25,000

DEC. 28.—By the *Kansas*=Liverpool:

George A. Alden & Co., East Indian	1,050
Boston Rubber Shoe Co., Africans	18,000
Reimers & Meyer, Africans	10,800
Total arrivals at Boston	232,450

NEW ORLEANS.

NOVEMBER.

	POUNDS.	VALUE.
Honduras	1,976	$ 405
Nicaragua	46,080	16,443
Colombia	1,281	418
Total	49,337	$17,266